INDEX, VOLUME 54, 1961*

Absorption of: Compound III by house flies, 231
3-isopropylphenyl *N*-methylcarbamate by house flies, 231
ronnel in Madeira cockroach, 224
Acalymma vittata, 1193
Acaracide-fungicides on roses, 659
Acaracide-resistant European red mite, 439
Acaricidal activity of cellulose polymers, 511
Acarina, 148, 204
Acarus sira, 239
Aceratagallia curvata, 800
Aceria litchii, 1074
neocynodonis, 836
Achaetoneura sp., 536
Acheta sp., 815
Adalia bipunctata, 194
Adelphocoris lineolatus, 244
rapidus, 244
Adoretus sinicus, 1074
Aedes aegypti, 64, 317, 773, 1054
dehydrogenase activity in, 513
device for sexing pupae, 819
effects of DDT on metabolism of, 461
increasing egg productivity, 1265
larvae, 584
sterilizing eggs of, 813
Aedes pomi, bionomics of, 1034
evaluation of insecticides against, 892
Aedes stimulans, 320
taeniorhynchus, 65
taeniorhynchus larvae, 584
Aedes vexans, rate of oviposition, 807
Aeneolamia varia saccharina, 771
Aeropedellus claratus, 374
Aerosol system for aircraft disinsectization 199
Aethecerus pinifolii, 349
Agelenidae, 148
Agenetettix deorum, 373
Aircraft disinsectization, aerosol for, 199
Alabama argillacea, 211, 729, 1012, 1261
Alanine, as mosquito attractant, 317
Aldrin against: alfalfa snout beetle, 601
apple maggot and plum curculio, 1056
clover root borer, 633
corn earworm, 587
cotton leaf perforator, 69
Drosophila and *Musca*, 1038
fall armyworm, 587
grasshoppers, 170
Hippelates, 638
house fly, 138
insects and pathogenic fungi, 544
Mexican fruit fly, 666
northern corn rootworm, 835
Pemphigus, 1152
red flour beetle, 437
rice water weevil, 711
tarnished plant bug, 245
Aldrin: bioassay of, 845
persistence of residues, 718
residual life of, 1188
Aldrin residues: in soils, 519
on red clover, 1058
Alfalfa: injury by aphids, 615
lindane residues on, 642
phosdrin residues on, 209
pollination, leaf-cutter bee for, 989
Alfalfa snout beetle larva: insecticides against, 601
Alfalfa weevil: responses to environments 625
seasonal history and control of, 743
Ali-E: activity in house flies, 907
and carbamate activity, 793
Alkylating agents as house fly sterilants, 684
Allethrin against: body lice, 650
house fly, 138
Japanese beetle, 1059
Allethrin: stability of, 731
toxicity to fly larvae from cattle feces, 410
Alsike clover, effects of insecticides on insects and fungi associated with, 543
Amblymerus sp., 349
verditer, 221
Amblyomma americanum, 1046, 1050
maculatum, 1232
Am. Cyan. 12008 against: aphids on Easter lily, 595
flower thrips, 233
grasshoppers, 170
Am. Cyan 12008: toxicity to house fly from chick droppings, 574
Am. Cyan. 12009: against stored-product insects, 236
Amer. Cyan. 12503, toxicity to two-spotted spider mite, 1260
Amer. Cyan. 18133 against: eye gnat, 867
insects on lima beans, 663
insects on sweet corn, 663
millipedes, 197
northern corn rootworm, 833
Amer. Cyan. 18133: toxicity to *Gambusia*, 1242
Am. Cyan. 18706 against: green peach aphid, 1004
stored-product insects, 236
Am. Cyan. 18706: toxicity to house fly from chick droppings, 574
Am. Cyanamid 24055 against: broccoli pests, 357
cotton insects, 967, 1012
Amino acids and amides in squash, 1196
Amphitornus coloradus, 372
Anacentrinus deplanatus, 301
Analysis of variance, transformation of data from insect control experiments, 859
Anaphoidea sp., 196
Anarsia lineatella, 933
Anasa tristis, 1193
Anastatus disparis, 875
Anastrepha ludens, 202, 600, 666
Anesthetizing device for minute insects, 806
Angoumois grain moth: and storage fungi, 1032
control of, 479
Anisota senatoria, 502, 962
Anisotarsus nitidipennis, 815
Anopheles albimanus, 64
gambiae, 882
quadrimaculatus, 63, 176
larvae, 584
Anormonis septentrionalis, 1105
Anthicidae, 148
Anthocoris melanocerus, 1002
Anthonomus grandis, 299, 311, 395, 622, 723, 813, 964, 966, 972, 979, 1012, 1131, 1132, 1197, 1214
biological phenomena of, 417
feeding and oviposition preferences, 1085
Anthrenus flavipes, 821
Antonina graminis, *Dusmetia sangwani* on, 952
Ants: attacking fleas, 1065
insecticides against, 204
Anuraphis bakeri, 415
menthae-radicis, 644
Anyphaenidae, 148
Aonidiella aurantii, 333, 445
Apanteles californicus, 348
fumiferanae, 351, 873
glomeratus, 157, 889
melanoscelus, 875
ornigis, 684
polychrosidis, 221
sp., 221
Aphaereta pallipes, 802
Aphelininae, 444
Aphelinus semiflavus, 54
Aphid control on: cantaloupes, 508
Easter lily, 595
strawberries, 287
virus yellows, 758
Aphid: mortality and virus transmission, 101
natural control of, 885
sampling on sugar beets, 1080
seed systemics for control of, 883
transmission of bean viruses, 414
Aphididae, 194
in greenhouses, 820
Aphidius nigriteleus, 282
Aphis fabae, 1064
gossypii, 125, 379, 411, 597, 598, 827, 869, 1262
helichrysi, 831
Aphodius granarius, 644
Aphytis lingnanensis, 611, 806
Apis mellifera, 239, 247, 566, 773, 928, 1008
foragers from colonies of, 431
Apple aphid: bionomics of, 1034
evaluation of insecticides against, 892
Apple maggot: in controlled atmosphere storage, 915
insecticides against, 467, 526
resistance to DDT, 880
soil insecticides against, 1056
Apricots, *Dasiops alveofrons* pest of, 504
Aramite against: aphids and spider mites, 288
arthropods, 819
citrus red mite, 56
European red mite, 439
insects and mites on mint, 645
rose pests, 1256
spider mites and black spot, 61
thrips on onions, 1254
two-spotted spider mite, 166, 420, 660
Aramite: in combination spray on roses, 420
Araneida, 148
Argasidae, 91
Argus persicus, 91
reflexus, 91
Argyrotaenia velutinana, 88
Arion ater, 778
Arizona, insects of, 324
Army cutworm: in wheat and barley, 250
oviposition response of, 273
Arphia pseudonietana, 374

* Compiled by Gladys O. Visel.

Arthropod fauna, effects of insecticides on, 146
Arthropods in greenhouses, 819
Asaphes fletcheri, 886
Aspergillus sp., 1032
Aspidiotus hederae, 611
Atomic Basic Chemicals X-500, toxicity to two-spotted spider mite, 1260
Attagenus piceus, 239
Aulocara elliotii, 373, 382
Autographa californica, 644

Bacillus larvae, toxicity of enzyme fractions, 773
Bacillus pipilliae, 777
Bacillus thuringiensis, 777
Bacillus thuringiensis against: budworms and hornworms, 1112
grape berry moth, 853
sugarcane borer, 1154, 1155
Bacillus thuringiensis, effect: on feeding to caged layers, 913
on Egyptian alfalfa weevil, 51
Bacillus thuringiensis: for control of cabbage looper, 698
Bacillus thuringiensis var. *sotto*, 777
Balaustium sp., 1026
Banana: *Caligo* on, 530
control of red rust thrips on, 1071
Barley, control of aphids on, 883
Barn fogging: fly control method, 862
Barthrin: toxicity to fly larvae from cattle feces, 410
Bathyplectes curculionis, 50, 196
curculionis in eastern U. S., 878
Bayer 16259 against: Mexican fruit fly 666
salt-marsh caterpillar, 1266
Bayer 21/199 residues in poultry, 97
Bayer 21/200: toxicity to fly larvae from cattle feces, 409
Bayer 22408: absorption by dairy cows, 446
Bayer 22408 against: apple maggot, 470
cattle grubs, 203
codling moth, 1129
eye gnat, 867
house flies, 386
mosquito larvae, 584
salt-marsh caterpillar, 1266
sugarcane borer, 1154
Bayer 22408: in dairy cows, 446
metabolism of by white rats, 1233
recovery from milk, 442
Bayer 22408 toxicity to: fly larvae from cattle feces, 406, 409
house fly from chick droppings, 574
poultry, 1118
two-spotted spider mite, 1260
Bayer 22684 against: cotton aphids, 1262
eye gnat, 870
grasshoppers, 170
Bayer 22893: against salt-marsh caterpillar, 1266
toxicity to two-spotted spider mite, 1260
Bayer 23453 against: bloodsucking ectoparasites, 993
salt-marsh caterpillar, 1266
Bayer 23655: against bloodsucking ectoparasites, 993
Bayer 24498: against bloodsucking ectoparasites, 993
Bayer 24869 against: cotton aphids, 1262
grasshoppers, 170
salt-marsh caterpillar, 1266
Bayer 25141 against: aphids, 883
apple maggot, 470
eye gnat, 867
grasshoppers, 170
Hippelates, 266
pink bollworm, 973
salt-marsh caterpillar, 1266
Bayer 25141 toxicity to: *Gambusia*, 1238
house fly from chick droppings, 574
two-spotted spider mite, 1260
Bayer 25142: toxicity two two-spotted spider mite, 1260
Bayer 25198 against: aphids, 883
bloodsucking ectoparasites, 993
salt-marsh caterpillar, 1266
Bayer 25198 toxicity to: *Gambusia*, 1242
two-spotted spider mite, 1260
Bayer 25820: absorption by dairy cows, 447
against cotton aphids, 1262
Bayer 29493 against: aphids, 883
apple maggot, 470
bloodsucking ectoparasites, 993
cabbage caterpillar, 476
cattle grubs, 203
codling moth, 1129
cotton insects, 967, 1012
European pine shoot moth, 987
eye gnat, 867
grasshoppers, 170
green peach aphid, 280
house flies, 386
mosquitoes, 65
northern corn rootworm, 833
pink bollworm, 973
resistant house flies, 114
sugar-beet root maggot, 895
sugarcane borer, 1155
thrips, 1255
Bayer 29493: barn fogging with, 863
metabolism of by white rats, 1232
recovery from milk, 442
Bayer 29493 toxicity to: fly larvae from cattle feces, 409
Gambusia, 1238
house fly from chick droppings, 574
poultry, 1118
two-spotted spider mite, 1260
Bayer 29709: toxicity to two-spotted spider mite, 1260
Bayer 30911 against: aphids, 893
bloodsucking ectoparasites, 993
cotton insects, 967, 1012
green peach aphid, 280
Bayer 34042: against *Hippelates*, 266
Bayer 34098: toxicity to poultry, 1118
Bayer 37342: against house flies, 386
Bayer 37342 toxicity to: fly larvae from cattle feces, 409
poultry, 1118
Bayer 38156: toxicity to *Gambusia*, 1240
Bean lines, resistance to potato leafhopper, 1077
Beans, resistance to Mexican bean beetle, 1018
Bee: field, dispersion of on alfalfa, 482
leafcutter, nesting sites for, 989
Beet lygus bug damage to, 117
Beet armyworm, control of on cotton, 192
Beet armyworm larvae, carbamate insecticides against, 1243
Belba sp., 702
Bembix pruinosa, 762
Bermuda grass, mite on, 836
BHC against: cabbage caterpillar, 476
Mexican fruit fly, 666
millipedes, 197
pink bollworm, 973
red flour beetle, 437
BHC: bioassay of, 845
contamination of chicken eggs, 802
Biochemistry of malathion against *Culex*, 1176
Biological effects in boll weevil tagged with P^{32}, 1197
Biology: comparison of strains of German cockroach, 747
control of *Caligo eurilochus*, 530
cotton leaf perforator, 67
Egyptian alfalfa weevil, 196
four-spotted fungus beetle, 713
greenbug biotype, 1171
Megachile (Eutricharaea) rotundata, 990
phenomena of boll weevil, 417
Physcus sp., 444
reproductive potential of Mexican fruit fly, 202
Sitona cylindricollis, 1027
sugarcane rootstock weevil, 301
Tetranychus telarius, 204
Bionomics, of *Aphis pomi* 1034
Birdsfoot trefoil, control of tarnished plant bug on, 244
Blackspot control: on roses, 659
with acaricide-fungicides, 61
Blaniulus guttulatus, 197
Blatta orientalis, 805
Blatella germanica, 198, 402, 417, 340, 773, 805, 1055, 1233
comparisons of strains, 747
insecticides on metabolites, 1022
Blattisocius tenuivorus, 196
Body lice, resistance to pyrethrins, 649
Boll weevil: artificial diets for, 923
biological effects in when tagged with P^{32}, 1197
biological phenomena of, 417
control of overwintered, 622, 966
diapause in, 1214
feeding and oviposition preferences of 1085
inheritance of resistance to endrin, 311
laboratory rearing of, 395
longevity of, 964
new apporach to control, 723
obtaining eggs of, 923
preferred feeding and egg laying sites, 979
susceptibility to phosphorodithioc acid esters, 813
Bollworm: laboratory rearing method, 949
Book Reviews: Beekeeping, 215
Fauna of U.S.S.R. Arachnida Vol. IV No. 2 Ixodid Ticks (Ixodidae), 216
Forest and Shade Tree Entomology, 215
Official Methods of Analysis of the Association of Official Agricultural Chemists, 826
Specifications for Pesticides—Insecticides—Rodenticides—Molluscicides — Herbicides — Auxiliary Chemicals—Spraying and Dusting Apparatus, 1068
Toxic Phosphorus Esters—Chemistry Metabolism and Biological Effects, 614
Boophilus annulatus, 91
calcaratus, 91
Borrelina reprimens, 875
Borrelinavirus, sp., 891
Boricola caprae, 1053
BPG, effect of on milk production, 754
Brachymeria compsilurae, 221
Brachyrhinus ligustici, 601, 860
ovatus, 644

Braconidae, 222
Brassica oleracea, 109, 889
Brevicoryne brassicae, 157, 356, 885
oleracea, 887
Broccoli, control of insect pests, of, 356
Bruchus brachialis, control of, 219
Bruneria brunnea, 374
Bryobia praetiosa, 1062
Bucculatrix ainsliella, in Michigan, 681
thurberiella, 67
Budworms, control of on tobacco, 1112
Bulan: against green peach aphid, 1004
Butonate against: bloodsucking ectoparasites, 994
house flies, 386
Butonate, toxicity to fly larvae from cattle feces, 409

Cabbage, control of insect pests of, 356
Cabbage looper: abundance of, 796
control of, 47, 141, 475
nuclear polyhedrosis virus in control of, 921
virus and bacteria for control of, 698
Cabbage looper larvae: carbamate insecticides against, 1243
Cactoblastis cactorum, parasitization by *Trichogramma semifumatum*, 207
Cadelle, toxicity of fumigants to, 451
Calcium arsenate: against apple maggot, 527
effects on cotton, 309
Caligo eurilochus: control of, 530
phoresy in parasite of, 465
Calliphora spp., 674
Callitroga hominivorax, 212, 941, 1046, 1049
Calosoma sycophanta, 875
Camerotrombidium sp., 149
Campogaster exigua, 1027
Campoplitis websteri, 645
Cantaloups: aphid control on, 598
curly top and cucumber mosaic on, 970
Cantharidae, 148
Captan against: blackspot, 420
clover root borer, 633
spider mites and black spot, 61
two-spotted spider mite, 204, 600
Captan, effect on sugar beet seedlings, 183
Carabidae, 148
Carbamate insecticides, synergism of, 150
Carbamates and ali-esterase activity, 793
Carbon disulfide against flour beetles, 1121
Carpocapsa pomonella, 559, 918, 1128
Carpophilus hemipterus, 428
Caterpillar: control on cole crops, 889
Cattle grub: control of, 79, 208, 252, 428
Gen. Chem. 4072 against, 1047
northern, artifical infestations of, 84
systemics, 203
Cauliflower: virus and bacteria for control of cabbage looper on, 698
Cellosize: against two-spotted spider mite, 511
Cellulose polymers, acaricidal activity of, 511
Ceratitis capitata, 30
Ceratomegilla maculata fuscilabris, 887, 891
Ceratopogonidae, 578
Ceron: against two-spotted spider mite, 511
Chaetocnema pulicaria, 665
Chaetanophothrips orchidii, 1071
Chalcidoidea, 222
Charips brassicae, 886
ChE activity in house flies, 907
Chigger vectors of scrub typhus, 654
Chilo suppressalis, 257
Chilocorus sp., 196
Chilopoda, 148
Chipman R-6199 in control of introduced pine sawfly, 159
Chipman 6200: toxicity of two-spotted spider mite, 1260
Chlorbenside: against Mexican fruit fly, 666
Chlorbenzilate, against arthropods, 819
Chlordane against: cabbage caterpillar, 476
cockroaches, 805
corn earworm, 587
fall armyworm, 587
imported fire ants, 72
Mexican fruit fly, 666
Pemphigus, 1152
red flour beetle, 437
stored-product insects, 236
Chlordane: bioassay of, 845
resistance of German cockroach to, 748
Chlorobenzilate: against citrus rust mite, 977
Chlorogenus callistephi, 1173
Chlorophan: hydrolysis by house fly, 239
Chlorthion against: apple maggot, 470
cabbage caterpillar, 476
cotton leaf perforator, 69
house fly, 133
Mexican fruit fly, 666
stored-product insects, 236
Choristoneura fumiferana, 812, 996, 1064
pinus, 1138, 1221
Choristoneura pinus, parasites of, 221
Chorizagrotis auxiliaris, 250
oviposition response of, 273
Chrysanthemums, phorate residue toxins in, 827
Chrysocharis sp., 349
Chrysopa spp., 53, 68, 282, 892
Cimex lectularius, 1232
Cincindelidae, 148
Ciriculifer tenellus, 970
Cirrospilus flavicinctus, 684
Citrus red mite populations, 54
Citrus rust mite: spray programs to control, 977
Clover mite: control studies, 1062
Clover root borer, importance of, 631
Clover root borer control, residues from, 1058
Clubionidae, 148
CMC: against two-spotted spider mite, 511
CMDP: effectiveness on alfalfa, 209
Coccidae: in greenhouses, 820
Coccinella transversoguttata, 887, 891
Coccinellidae, 148
Cockroach: controlled with Kepone, 821
Madeira, functions of, 224
Madeira, survival of, 661
resistance to organic insecticides, 805
Codling moth, new materials for control of, 1127
Cole crops: control of aphids on, 885
insect resistance in, 156
Colcomegilla maculata lengi: longevity of unfed larvae, 194
Colcoptera, 148, 451
of Arizona, 325
Coleopterous larvae, storage of, 610
Collecting insects, apparatus for, 800
Collops sp., 68
Colydiidae, 148
Comperiella bifasciata, 445
Compounds I, II, III, IV, V, VI, against house fly, 138
Compsilura concinnata, 875
Conoderus amplicollis, 869
Conotrachelus nenuphar, 283, 915, 1056
Copidosoma deceptor, 352
truncatellum, 889
Copper: against spider mites and black spot, 61
Cooper sulfate: against *Triops*, 38
Co-Ral against: cattle grubs, 203, 208, 429
eye gnat, 867
face flies, 563
horn flies, 208
house flies, 386, 1162
Mexican fruit fly, 666
mosquito larvae, 584
poultry lice, 1114
screw worm, 941
ticks, 1050
Co-Ral: from poultry tissues, 1140
recovery from milk, 442
residues in poultry, 25, 97
Coral toxicity to: fly larvae from cattle feces, 406, 409
house fly from chick droppings, 574
Cordillacris crenulata, 371
Cordyceps militaris, 963
Corn: European corn borer in, 850
mite control on yield, 608
resistance in by corn earworm and European corn borer, 1248
stalk rot in, 850
Corn earworm: bags for control of, 587
control, 688
resistance in sweet corn, 1248
seasonal populations of, 692
Corn earworm larvae: susceptibility to DDT, 1203
Corn seed, effect of fumigation on, 764
Corn stem weevil, control of, 546
Cotton: beet armyworm on, 192
early-season control of thrips on, 974
Cotton, effects of: calcium arsenate on, 309
toxaphene-DDT on, 309
Cotton: insecticides affecting development, 309
Lygus hesperus on, 1261
Cotton aphids, phosphoric acid esters against, 1262
Cotton fiber quality related to insect control, 1131
Cotton fleahoppers, control of, 966
Cotton insect control related to cotton fiber quality, 1131
Cotton insects: collection by lamp and traps, 1253
control of, 1011
Cotton leaf perforator, control of, 67
Cotton plant: dimethoate absorption in, 1206
Di-Syston in, 1228
uptake of insecticides by, 568
Cotton seed: emergence of phorate-treated, 296, 855
phroate-treated, 379
Cowpea: resistance to potato leafhopper, 1077
Crag Fly Repellent: against face flies, 434, 563
Cranberry, *Sparganothis sulfurana* on, 811
Cratichneumon w-album, 962
Cratypedes neglectus, 377
Cube: against Mexican bean beetle, 599
Cucumber mosaic virus, effect on cantaloups, 970

Culex pipiens 320
pipiens quinquefasciatus, 1232
quinquefasciatus, 569
tarsalis: resistance to malathion, 1176
Culicoides: in experiments with sheep, 816
obsoletus, treated screens against, 578
variipennis sonorensis, 816
Cultroribula divergens, 702
Curly top virus: effect on cantaloups, 970
Cycloheximide: against two-spotted spider mite, 122
Cymatodera oripennis, 562
Cytovirin: against two-spotted spider mite, 123

Dasiops alveofrons, pest of apricots, 504
DDE: residues in soils, 519
DDT against: *Aedes aegypti*, 513
apple maggot, 470, 527
Blattella germanica, 1022
body lice, 650
boll weevils, 299
cabbage looper, 141, 475
cockroaches, 805
codling moth, 1129
corn earworm, 587, 689, 1204
corn stem weevil, 546
cotton insects, 967
cotton leaf perforator, 69
Drosophila and *Musca*, 1038
elm bark beetle, 293
European corn borer, 782
European pine shoot moth, 987, 1014
eye gnat, 131
face fly, 434, 803
fall armyworm, 546, 587
flower thrips, 233
German cockroaches, 198, 340, 748
grape berry moth, 853
Gypsy moth, 315
Hippelates, 266, 638, 697
horn fly, 393
house fly, 133, 343, 803
insects and pathogenic fungi, 544
Japanese beetle, 1059
lesser peach tree borer, 799
Lygus, 1261
Mexican fruit fly, 666
millipedes, 197
mimosa webworm, 523
mites, 608
mosquito, 65
mosquito larvae, 586
navel orangeworm, 559
Nysius raphanus, 121
Pemphigus, 1152
pine sawfly, 810
pink bollworm, 193, 973
punkies, 578
red flour beetle, 437
simuliid larvae, 608
Sparganothis sulfurana, 811
spider mites and black spot, 61
spotted alfalfa aphid, 1145
spread of internal cork of sweet potato, 125
stable fly 528
stored-product insects, 236
tarnished plant bug, 245
thrips on peanuts, 201
Triops, 38
vetch bruchid, 219
DDT: bioassay of, 845
bollworm resistance to, 951
C^{14} labeled, metabolism in *Drosophila melanogaster*, 9
DDT effect on: cotton fiber, 1132
metabolism of *Aedes*, 461
DDT: in ecological approach to insecticides, 109
lethality to honey bee, 1009
loss to soil, 175
metabolism of C^{14} labeled, 9
recovery from milk, 442
residues: in soils, 519
on oranges, 455
DDT: resistance by apple maggot, 880
DDT susceptibility: of corn earworm larvae to, 1203
selection for, 611
DDT: toxicity to *Gambusia*, 1238
DDVP against: apple maggot, 470
face fly, 434, 563, 1148
Hippelates, 266
house flies, 387, 1257
Japanese beetle, 1059
Mexican fruit fly, 666
stored-product insects, 236
yellowjackets, 628
DDVP: hydrolysis by house fly, 239
residual activity of, 508
DDVP toxicity to: fly larvae from cattle feces, 406
house fly from chick droppings, 574
DDVP: used in insecticide vaporizer, 399
Deet, against poultry lice, 1114
Dehydrogenase activity in *Aedes aegypti*, 513
Dekafos: toxicity to *Gambusia*, 1240
Delnav against: aphids and spider mites, 288
green peach aphid, 1004
house flies, 386
poultry lice, 1114
stored-product insects, 236
ticks, 1050
two-spotted spider mite, 166
Delnav: toxicity to house fly from chick droppings, 574
Demeton against: aphids, 595, 598, 758
citrus red mite, 56
green peach aphid, 1005
ground pearl, 423
insects and mites on mint, 645
mimosa webworm, 524
pea virus diseases, 165
rusty plum aphid and ants, 204
salt-marsh caterpillar, 1266
spider mites and black spot, 61
spotted alfalfa aphid, 1145
stored-product insects, 236
two-spotted spider mite, 166, 421, 660
Demeton: bioassay of, 842
uptake by cotton plants, 570
Dendroctonus brevicomis, toxicity of pine resin vapors to, 359, 365
jeffreyi, toxicity of pine resin vapors to, 359, 365
monticolae, 348
Dermacentor albipictus, 1050
marginatus, 91
Dermaptera, 148
of Arizona, 327
Dermestes maculatus, 773
Deroceras agreste, 778
DFP: hydrolysis by house fly, 239
Diabrotica longicornis, 833
virgifera, 833
Diaphonia nitidalis, 1191
Diaretus rapae, 885
Diaspididae, in greenhouses, 820
Diatraea saccharalis, 257, 605, 1065, 1153, 1155
diapause in, 285
Diazinon against: aphids, 288, 598, 893
apple maggot, 470, 527
cabbage looper, 144, 477
clover root borer, 633
codling moth, 1129
eye gnat, 867
face flies, 563
grape berry moth, 853
grasshoppers, 170
green peach aphid, 280, 1004
Hippelates, 266
house fly, 138, 386, 1162
insects and mites on mint, 645
Mexican fruit fly, 666
mites on Bermuda grass, 838
northern corn rootworm, 833
pea virus diseases, 165
red flour beetle, 437
salt-marsh caterpillar, 1266
Sparganothis sulfurana, 811
spider mites, 288
spotted alfalfa aphid, 1146
stable fly, 528
stored-product insects, 236
sugar-beet root maggot, 178
sugarcane rootstock weevil, 302
thrips of peanuts, 201
Triops, 39
Diazinon: bait for *Drosophila*, 426
barn f gging with, 862
bioassay of, 842
cross-tolerance of eggs of two-spotted spider mite to, 592
effect on sugar beet seedlings, 183
recovery from milk, 441
residual life of, 1187
toxicity to fly larvae, 409
Dibrachoides druso, 196
Dibrom against: aphids, 598
apple maggot, 470
broccoli pests, 357
cabbage looper, 142, 476, 923
cabbage pests, 356
cotton aphids, 1262
cotton leaf perforator, 70
face flies, 563
grasshoppers, 170
green peach aphid, 280, 1004
Hippelates, 266
house flies, 114, 386
insects and mites on mint, 645
Japanese beetle, 1059
pink bollworm, 193
poultry lice, 1114
salt-marsh caterpillar, 1266
spotted alfalfa aphid, 1146
stored-product insects, 236
thrips, 201, 1255
vetch bruchid, 219
yellowjackets, 630
Dibrom: hydrolysis by house fly, 239
residual activity of, 508
used in insecticide vaporizer, 399
Dicapthon against: green peach aphid, 1005
Hippelates, 266
house fly, 138
salt-marsh caterpillar, 1266
stored-product insects, 236
Dicapthon toxicity to: fly larvae from cattle feces, 410
house fly from chick droppings, 574
Dicladocerus sp., 348
Dieldrin against: *Aedes aegypti*, 513
alfalfa snout beetle, 601
alfalfa weevil, 742
apple maggot and plum curculio, 1056
Blattella germanica, 1022
boll weevil, 813
cabbage caterpillar, 477

chigger vectors, 654
clover root borer, 633
cotton leaf perforator, 69
Drosophila and *Musca*, 1038
eye gnat, 131
flower thrips, 233
grasshoppers, 170
Hippelates, 266, 638, 697
house fly, 138
imported fire ants, 72
lesser peach tree borer, 800
Mexican fruit fly, 666
mimosa webworm, 523
mosquitoes, 65
Nysius raphanus, 121
Pemphigus, 1152
red flour beetle, 437
red rust thrips, 1073
stable fly, 528
stored-product insects, 236
sugarcane rootstock weevil, 302
thrips, 1255
Triops, 38
Dieldrin: bioassay of, 845
lethality to honey bee, 1009
persistence of residues, 718
recovery from milk, 442
Dieldrin residue: in soils, 519
on red clover, 1058
on vegetation, 1091
Diethyl phosphorodithioic acid in eggs, 1142
Dilan against: codling moth, 1129
cotton leaf borer, 69
insects on lima beans, 663
Mexican fruit fly, 666
pink bollworm, 193
salt-marsh caterpillar, 1266
Dilan: bollworm resistance to, 951
Dimethoate against: aphids, 598, 883, 893
apple maggot, 470
bloodsucking ectoparasites, 994
broccoli pests, 357
cabbage looper, 143, 477
cattle grubs, 252
codling moth, 1129
cotton leaf perforator, 70
European pine shoot moth, 987
European red mite, 439
eye gnat, 867
face flies, 434, 563
grape berry moth, 853
grasshoppers, 170
green peach aphid, 281, 1005
hog louse, 821
house flies, 387
Japanese beetle, 1059
leafhopper, 1175
millipedes, 197
mites on Bermuda grass, 838
mosquito larvae, 584
northern corn rootworm, 835
paddy borer, 707
poultry lice, 1114
rusty plum aphid and ants, 204
stored-product insects, 236
sugarcane borer, 1154, 1155
sugarcane rootstock weevil, 302
thrips on peanuts, 201
Dimethoate: barn fogging with, 862
effect on milk production, 756
fly control by, 740
in the cotton plant, 1206
metabolism of P^{32}-labeled, 733
residues in milk, 740
systemic activity of, 1132
Dimethoate toxicity to: fly larvae, 406
house fly, 574
Dimethoate: uptake by cotton plants, 570
Dimetilan against: bloodsucking ectoparasites, 993
resistant house flies, 114
Dimite: against two-spotted spider mite, 166
Diphenylamine: toxicity to fly larvae, 410
Diplocarpon rosae, 61, 421
Diplodia zea, 850
Diplopoda, 148
Diprion similis: control of, 159
Pinus strobus against, 1061
Diptera, 1, 504, 578
Diptera, of Arizona, 327
Dipterex against: apple maggot, 470
cotton leaf perforator, 70
face fly, 1148
house flies, 386, 1257
Mexican fruit fly, 666
Nysius raphanus, 121
pink bollworm, 193
Dipterex: hydrolysis by house fly, 239
toxicity to fly larvae, 409
Di-Syston against: aphids, 595, 758, 883
apple maggot, 470
eye gnat, 867
greenbug, 606
green peach aphid, 1004
insects on lima beans, 663
insects on potatoes, 663
insects on sweet corn, 663
leafhopper, 1175
mimosa webworm, 523
mites on Bermuda grass, 838
northern corn rootworm, 833
spotted alfalfa aphid, 1146
stored product insects, 236
thrips on cotton, 974
Di-Syston: emergence of cotton seed treated, 855
in cotton plants, 1228
on rice, 937
Dition toxicity to: fly larvae from cattle feces, 409
two-spotted spider mite, 1260
Dopidosoma deceptor, 348
Dow ET-14: against apple maggot, 470
Dow ET-15 against: aphids and spider mites, 288
apple maggot, 470
house flies, 386
Mexican fruit fly, 666
Dow ET-15: toxicity to fly larvae from cattle feces, 409
Dowco 105: against cattle grubs, 79
toxicity to house fly, 574
Dowco 109 against: bloodsucking ectoparasites, 993
cattle grubs, 79, 429
Dowco 109: toxicity to house fly, 574
Dow K-6882: toxicity to *Gambusia*, 1240
Dow M361: against apple maggot, 470
Dracvulacephala portola, 937
Drosophila: feeding for bioassay of residue, 822
flight distances of, 425
Drosophila: feeding for bioassay of residue, 822
flight distances of, 425
Drosophila melanogaster, 178, 425, 677, 841, 1038, 1056
metabolism of C^{14}-labeled DDT in, 9
Drosophila pseudoobscura, 677
sp., 417
sp., attractants for, 677
virilis, 677
Duocide: against mites, 838
Dusmetia sangwani, introduction and establishment of, 952
Dutch elm disease control, Tetram in, 127
Dye technique of spray oil on citrus, 333
Dylox against: aphids on cantaloupes, 598
cabbage caterpillar, 477
face flies, 563
green peach aphid, 280
Hippelates, 266
northern corn rootworm, 833
Sparganothis sulfurana, 811
stored-product insects, 236
thrips on peanuts, 201
Dylox: for control of ground pearl, 423
Dysderidae, 148

Earomyia sp., 504
Easter lily, aphids on, 595
Echidnophaga gallinacea, 1212
Ecpantheria sp., 1073
Eggs, residues in, 457
Egyptian alfalfa weevil: biological notes, 196
control of, 51
Elateridae, 148
Elm bark beetle: feeding deterrents against, 293
Elm spanworm, egg-mass studies, 1060
Embioptera, of Arizona, 328
Empoasca fabae, 209, 664, 705, 846, 860, 1077
fabalis, 1077
solana, 379
spp., 1217
Empusa aphidis, 887
Endrin: affecting potato yields, 839
Endrin against: apple maggot, 470, 1056
broccoli pests, 359
cabbage caterpillar, 477
cabbage looper, 923
cotton insects, 1012
cotton leaf perforator, 69
green peach aphid, 1005
Hippelates, 638
hornworms, 95
lesser peach tree borer, 800
Mexican fruit fly, 666
millipedes, 198
Nysius raphanus, 121
overwintered boll weevils, 622
paddy borer, 707
Pemphigus, 1152
pink bollworm, 193
plum curculio, 1056
red flour beetle, 437
salt-marsh caterpillar, 1266
stored-product insects, 236
sugarcane borer, 1154, 1155
sugarcane rootstock weevil, 302
tarnished plant bug, 245
Endrin: bioassay of, 845
bollworm resistance to, 951
persistence of residues, 718
Endrin residues: in lambs, 605
on corn stover, 398
Endrin: response of red-banded leaf roller to, 88
resistance in boll weevil, 311
Ennomos subsignarius, 1060
Enoclerus quadrisignatus, 815
ENT 21195: against salt-marsh caterpillar, 1266
Epeiridae, 148
Ephestia cautella, 212
sp., 196
Epilachna varivestis, 187, 508, 599, 665, 1018, 1054
Epitrix cucumeris, 664

EPN against: sugarcane borer, 1155
two-spotted spider mite, 166
Estigmene acrea, 211, 1261, 1266
Ethion against: aphids on cantaloupes, 598
apple maggot, 471
cabbage looper, 142
codling moth, 1129
eye gnat, 867
green peach aphid, 281
insects and mites on mint, 645
insects on lima beans, 663
millipedes, 197
mites, 608
northern corn rootworm, 835
pear leaf scorch, 920
Sparganothis sulfurana, 811
stored-product insects, 236
sugar-beet root maggot, 896
thrips, 201, 1255
two-spotted spider mite, 166
Ethion: bioassay of, 843
lethality to honey bee, 1009
Ethylene dibromide, against Mexican fruit fly, 666
Ethyl Guthion against: codling moth, 1129
eye gnat, 867
Eucoila sp., 802
Eulophidae, 349, 444
Eumargarodes laingi, chemical control of, 423
European brown snail, control of, 152
European corn borer: control in potatoes, 782
effect of four-spotted fungus beetle on, 713
interaction in corn, 850
population fluctuations of a parasite on, 213
resistance in, 267, 1248
test crosses in corn, 784
voltinism of, 550
European pine shoot moth: DDT against, 1014
insecticides in control of, 987
European red mite: acaricide-resistant strains, 439
pear leaf scorch relation to, 918
Euschongastia (*Laurentella*) *indica*, 655
Eutetranychus banksi, 977
Eutrombicula (*E.*) *wichmanni*, 655
Evagora, 347
milleri, 347
starki, 347
Evipal: against Mexican bean beetle, 600
Excretion of ronnel in Madeira cockroach, 224
Exorista larvarum, 875
Eye gnat: in California, 206
insecticide resistance in, 695
insecticides against, 264, 865
susceptibility of to residual insecticides, 130

Face fly: control of, 434, 1147
first decade with, 761
parasites of, 802
susceptibility to insecticides, 803
tests against, 562
Face fly larvae, toxicity to from feces, 406
Fall armyworm, control of, 546, 587
Fasciola gigantica, 1
Ferbam against: blackspot, 420
spider mites and black spot, 61
two-spotted spider mite, 660
Flatid planthopper, 1104
Fleas, attacked by ants, 1065
Flour beetles, carbon disulfide against, 1121
Flower thrips, control of, 233
1-Fluorochlordene: against grasshoppers, 170
Fly control: effect of feeding *Bacillus* to caged layers, 913
in dairy barns, 740
on milk production, effect of, 751
Forage, persistence of residues on, 718
Forceps, for transferring honey bee eggs, 247
Formicidae, 148
Fur-spotted fungus beetle, biology of, 713
Frankliniella fusca, 200, 974, 1131
occidentalis, 77, 974, 1217, 1254
sp., 379, 966
tritici, 233, 974
Fruit lecanium, factors affecting control of, 1165
Fumigant sampling, airflow indicator in, 1064
Fumigants, relationships of insecticidal, 537
Fusarium graminearum, 850
moniliformae, 850

Gahrliepia (*G*). *fletcheri*, 655
Galumna currum, 702
sp., 703
virginiensis, 701
Gambusia affinis, toxicity of insecticides to, 1237
Gamma radiation on: Mexican fruit fly, 202
stored-product insects, 241
Geigy 24027: toxicity to two-spotted spider mite, 1260
Geigy 30493: against cotton insects, 1014
Geigy 30494 against: bloodsucking ectoparasites, 993
cotton insects, 966, 1012
house flies, 386
stored-product insects, 236
Geigy 36368, against cotton insects, 1014
Gelechiidae, 347
Gen. Chem. 1189: against *Hippelates*, 266
Gen. Chem. 3561 against: grasshoppers, 170
Gen. Chem. 3582 against: bloodsucking ectoparasites, 994
cotton aphids, 1262
eye gnat, 867
horn flies and stable flies, 1047
house flies, 386
livestock insects, 1046
salt-marsh caterpillar, 1266
screw worms, 1049
ticks, 1050
Gen. Chem. 3583 against: bloodsucking ectroparasites, 994
cabbage looper, 142
cotton aphids, 1262
eye gnat, 867
grasshoppers, 170
horn flies and stable flies, 1047
house flies, 386
livestock insects, 1046
salt-marsh caterpillar, 1266
screw worms, 1049
Gen. Chem. 3583: toxicity to *Gambusia*, 1240
Gen. Chem. 3661 against: cotton aphids, 1262
grasshoppers, 170
against salt-marsh caterpillar, 1266
Gen. Chem. 3707 against: cotton aphids, 1262
grasshoppers, 170
pink bollworm, 973
salt-marsh caterpillar, 1266
Gen. Chem. 4072 against: bloodsucking ectoparasites, 994
cattle grubs, 1047
cotton aphids, 1262
eye gnat, 867
face flies, 563
grasshoppers, 170
green peach aphid, 280
horn flies and stable flies, 1047
house flies, 386
lice, 1052
livestock insects, 1046
salt-marsh caterpillar, 1266
screw worms, 1049
ticks, 1050
Gen. Chem. 4072: residues in milk, 1053
Gen. Chem. 4072: toxicity to: cattle, 1051
fly larvae from cattle feces, 409
Gambusia, 1240
Genite: against insects and mites on mint, 645
Genite 923: against clover mite, 1062
Geocoris sp., 68
German cockroach: metabolism of proline in poisoned, 198
new enzyme in, 340
strains of, 747
Gibberellin: effects on nutrition of mites, 985
Glischrochilus (*Ips*) *fasciatus*, 713
q. quadrisignatus, biology of, 713
Glycyphagus domesticus, 196
Glypta fumiferanae, 221
Gnaphosidae, 149
Goniocotes gallinae, 1114
Gossypium barbadense, 484
hirsutum race *latifolium*, 485
hirsutum race *marie-galante*, 485
hirsutum race *palmeri*, 485
Grain, stored, insecticides against pests of, 235
Grape berry moth, insecticides against, 853
Grapholitha molesta, 915
Grasshoppers: new insecticides against, 170
rainfall effect on, 382
rangeland vegetation losses from, 369
Greenbug: biotype, biological studies of, 1171
Di-Syston against, 606
tolerance of small grains to, 303
Green peach aphid: control of on potatoes, 1003
insecticide treatments on peppers, 279
resistance of *Nicotiana* to, 946
wing movement of, 1135
Ground pearl, control of, 423
Guthion: affecting potato yields, 839
Guthion against: apple maggot, 470, 527
cabbage looper, 145, 477
codling moth, 1129
cotton insects, 1012
European brown snail, 152
European pine shoot moth, 987
eye gnat, 867
grape berry moth, 853
green peach aphid, 280, 1004
Hippelates, 266
lesser peach tree borer, 800

Mexican fruit fly, 666
naval orangeworm, 559
overwintered boll weevils, 622
peach tree borer, 668
pear leaf scorch, 920
pink bollworm, 193, 972
salt-marsh caterpillar, 1266
Sparganothis sulfurana, 811
spotted alfalfa aphid, 1146
stored-product insects, 237
sugarcane borer, 1154
thrips, 201, 1255
vetch bruchid, 219
Guthion: bioassay of, 842
Guthion effect: of dietary on chicks, 1229
on cotton fiber, 1132
Guthion: lethality to honey bee, 1009
Gypsy moth: aerial spray tests against, 315
egg parasite in Connecticut, 876
parasites of, 873

Habrocytus sp., 196
Habrolepis rouxi, 445
Hadrotettix trifasciatus, 377, 382
Haemaphysalis concinna, 91
inermis, 91
otophila, 91
punctata, 91
sulcata, 91
Haematobia irritans, 430, 741, 753, 862, 871, 1047, 1101
Haematopinus suis, 821
Haemerocampa leucostigma, 875
Hairy spider beetle, lindane, malathion, methoxychlor, and pyrethrins-piperonyl butoxide against, 397
Hay, persistence of residues on, 718
Heliothis phloxiphaga, 644
Heliothis virescens, 93, 949, 1112
Heliothis zea, 70, 192, 210, 356, 546, 587, 609, 689, 692, 923, 966, 972, 1012, 1203, 1243, 1248, 1253, 1261
laboratory rearing method, 949
Helminthosporium sp., 837
Heptachlor against: alfalfa snout beetle, 601
alfalfa weevil, 744
apple maggot and plum curculio, 1056
cabbage caterpillar, 476
clover root borer, 633
corn earworm, 587
Drosophila, 1042
Egyptian alfalfa weevil, 51
fall armyworm, 587
flower thrips, 233
house fly, 138
imported fire ant, 45, 72
insects and pathogenic fungi, 544
Mexican fruit fly, 666
millipedes, 197
northern corn rootworm, 835
Pemphigus, 1152
rice water weevil, 711
rusty plum aphid and ants, 204
salt-marsh caterpillar, 1266
sugar-beet root maggot, 178, 895
sugarcane rootstock weevil, 302
Triops, 38
Heptachlor: bioassay of, 845
damage to rutabagas, 193
effect on sugar beet seedlings, 183
residual life of, 1188
Heptachor residues: in truck crops, 1264
on red clover, 1058
Heptachlor toxicity: to house fly, 574
Hercules 426: against poultry lice, 1114
Hercules 3004 against: cotton aphids, 1262
salt-marsh caterpillar, 1266
Hercules 3653: against salt-marsh caterpillar, 1266
Hercules 3895 gainst: cotton aphids, 1262
salt-marsh caterpillar, 1266
Hercules 4580: against house flies, 386
toxicity to fly larvae from cattle feces, 409
Hercules AC 5727 against: grasshoppers, 170
mosquitoes, 63
Hippelates, 266
Hercules AC 5727, synergism of, 1243
Hercules AC 5727 toxicity to: fly larvae from cattle feces, 409
Gambusia, 1242
Heteroptera, of Arizona, 328
Hexylene Glycol: against Japanese beetle, 1059
Heyden Newport Newphos No. 1, against cotton aphids, 1262
Hippelates: control of, 636
insecticides against, 264
Hippelates collusor: 264, 638, 1046
insecticide resistance in, 695
insecticides against, 865
Hippelates dorsalis, 640
hermsi, 638
impressus, 131
pusio, 640, 697
pusio, susceptibility of to residual insecticides, 130
robertsoni, 264, 697
sp., in California, 206
Hippodamia convergens, 51, 598, 607, 887, 891
sp., 68, 196
Hog louse, control of, 821
Homadaula albizziae, control of, 523
Homalodisca coagulata, overwintering of, 810
Homoptera, 194, 423
Honey bee: colonies, foragers from, 431
effect of Sevin on, 566
eggs, transferring, 247
nonrandom distribution of foraging, 928
toxicity of insecticides to, 1008
Horn fly: control of, 208, 1047
insecticides against, 392
pour-on control, 1101
Hornworms: control of on tobacco, 1112
control system for, 93
Horogenes, sp., 889
House fly: absorption and metabolism 231
ali-esterase and Cholinesterase, 103
alkylating agents as sterilants, 684
attractants for, 670
bioassay methods, 343
control of resistant, 114
esterase activity and susceptibility to parathion, 904
esterase inhibition in poisoning of, 1161
insecticide hydrolysis by, 239
insecticide resistance in, 1257
parathion metabolism in, 389
residues against, 386
resistance to carbamate insecticides, 132
ribonucleic acid in ovary, 651
susceptibility to insecticides, 803
synthetic pyrethroids against, 1250
toxicity ratio, 580
House fly larvae toxicity: of chick droppings to, 573
of organophosphates in, 1117
to from feces, 406, 408
Hyalomma anatolicum, 91
detritum, 91
dromedarii, 91
excavatum, 91
savignyi, 91
Hydrocyanic acid: effect of on corn seed, 764
fumigation of small legume seeds with, 21
Hylastinus obscurus, 631, 1058
Hylemya antiqua, 869
Hylobius radicis, 610
Hymenoptera, 148, 465
of Arizona, 331
Hypera brunneipennis, 50, 196, 878
Hypera postica: 50, 196, 743, 878
responses to controlled environments, 625
Hyperodes humilis, control of, 546
Hypoderma bovis: 252, 278, 428
artificial infestations of, 84
control of, 79
Hypoderma lineatum, 79, 85, 203, 208, 252, 278, 427, 1047
spp., 814
Hysteroneura setariae, 204

Ichneumonidae, 222
Imported fire ant: baits against, 70
control of, 45
toxic bait studies, 1096
Indian-meal moth, rearing medium for, 812
Insect resistance in certain vegetables, evaluation of, 156
Insecticide: hydrolysis by house fly, 239
problem, ecological approach to, 108
residues, bioassay of, 841
vaporizer, 399
Insecticides: evaluation of as protectants 235
on insects and pathogenic fungi, 543
residual life of, 1186
synergism of carbamate, 1243
Insecticides, systemic: on potatoes, lima beans, sweet corn, 663
on rice, 937
Insecticides: trademarked names or code numbers, 1066
Insects: entomophagous, uniformity in culture, 611
phytophagous, individual rearing of, 609
Iridomyrmex humilis, 204
Isodrin against: apple maggot, 470
clover root borer, 633
Mexican fruit fly, 666
Isolan against: *Hippelates*, 266
house fly, 132, 152
Isolan: inhibiting aliphatic esterase activity, 793
toxicity to house fly, 574
Isotox: against mites, 838
Itoplectis conquisitor, 221
Ixodes ricinus, 91
Ixodidae, 91

Jack-pine budworm: habits of, 1138
parasites of, 221
pest of conifers, 1221
Japanese beetle, insecticidal aerosols against, 1059

Karathane: against two-spotted spider mite, 166
Kelthane against: aphids and spider mites, 288
arthropods, 819
citrus red mite, 56
clover mite, 1062
European red mite, 440
German cockroach, 340
insects and mites on mint, 645
mites, 608
pear leaf scorch, 920
spotted alfalfa aphid, 1146
two-spotted spider mite, 166
Kelthane: cross-tolerance of eggs of two-spotted spider mite to, 592
metabolic product of C^{14}-DDT, 9
orchard-mite resistance to, 12
Kepone against: broccoli pests, 357
cabbage pests, 357, 476
codling moth, 1129
European corn borer, 782
grasshoppers, 170
imported fire ants, 71
Tribolium and cockroach, 821
Triops, 39
Kepone: recovery from milk, 442
toxicity to house fly from chick droppings, 574

Labidura riparia, 815
Labiduridae, 148
Lampyridae, 148
Laphygma frugiperda, 587
control of, 546
Larvaevoridae, 222
Lead arsenate: against apple maggot, 470, 527
Leafhopper, P^{32} in biological studies of, 1260
Lecanium corni, 1165
Legume seeds, germination after fumigation, 21
Lepidoptera, 273, 347, 465, 530
of Arizona, 331
Lepidosaphes beckii, 445
Leptinotarsa decemlineata, 664
Lesser peach tree borer, control of, 799
Lethane: against punkies, 578
Lethane 384: effect of on milk production, 753
Lettuce root aphid, rearing, 1256
Leucophaea maderae: 661, 1054
functions of, 224
Light trap collections, 305
Lima beans, systemic insecticides on, 663
Lime, damage to rutabagas, 193
Limonius canus, 869
Lindane against: aphids and spider mites, 228
body lice, 650
Drosophila and *Musca*, 1038
eye gnat, 131
flower thrips, 233
hairy spider beetle, 397
Hippelates spp., 697
house fly, 133
Mexican fruit fly, 666
millipedes, 198
northern corn rootworm, 835
Phemphigus, 1152
spider mites and black spot, 61
spotted alfalfa aphid, 1145
stored-product insects, 237
ticks 1050
Lindane: bioassay of, 845
in eggs and chicken tissues, 675
Lindane residues: in chickens and eggs, 487
on alfalfa, 642
Lindane: resistance of German cockroach to, 748
Linyphiidae, 149
Lipeuris caponis, 1114
Lissorhoptrus oryzophilus, 710
Lithobiidae, 148
Liver fluke snail, control of, 1
Livestock insects, control of, 1046
Lodgepole needle miner parasites, 347
Lonchaeidae, 504
Longitarsus waterhousei, 644
Lotus corniculatus, 244
Loxostege sticticalis, 644
Lychee, wetting agents on, 1074
Lycosidae, 149
Lydella grisescens, population fluctuations, 213
Lygus bug damage to beet, 117
Lygus elisus, 974
hesperus, 117, 800, 974
hesperus, laboratory tests against, 1261
lineolaris, 209, 974, 1131
control of, 244
spp., 157
Lymnaea ollula, control for, 1
Lysine: as mosquito attractant, 317
Lysiphlebus testaceipes, 885

Macrosiphum dirhodum, 883
euphorbiae, 597
gaurae, 414
granarium, 883
pisi, 51, 161, 209, 220, 845
pisi, injury to alfalfa, 615
scoliopi, 597
Macrosteles fascifrons, 209, 506, 1173
Madremyia saundersii, 221
Malaoxon: against *Culex*, 1176
Malathion against: Angoumois grain moth, 479
aphids and spider mites, 288
apple maggot, 470, 527
arthropods, 819
body lice, 650
broccoli pests, 357
cabbage looper, 142, 476, 923
citrus red mite, 56
clover mite, 1062
cockroaches, 805
cotton insects, 1012, 1262
cotton leaf perforator, 69
Drosophila and *Musca*, 1038
eye gnat, 131
face flies, 564, 1148
flower thrips, 233
grasshoppers, 170
green peach aphid, 1005
ground pearl, 423
hairy spider beetle, 397
Hippelates, 266
horn fly, 393
house fly, 114, 133, 387, 1162, 1257
insects and mites on mint, 645
leafhopper, 1175
Mexican fruit fly, 601, 666
millipedes, 197
mimosa webworm, 523
mites on Bermuda grass, 838
mosquitoes, 65
Nysius raphanus, 121
overwintered boll weevils, 623
Pemphigus, 1152
poultry lice, 1114
punkies, 578
Recurraria milleri, 352
red flour beetle, 437
rusty plum aphid and ants, 204
salt-marsh caterpillar, 1266
spider mites and black spot, 61
spotted alfalfa aphid, 1145
stable fly, 528
sticktight flea, 1212
stored-product insects, 237
tarnished plant bug, 245
thrips, 201, 1255
Triops, 38
two-spotted spider mite, 166, 420, 660
vetch bruchid, 219
Malathion: bioassay of, 842
cross tolerance of eggs of two-spotted spider mite to, 592
hydrolysis by house fly, 239
inhibition of house fly Ali-E and ChE by, 103
protectant for corn, 900
residual life of, 1188
Malathion resistance: of *Culex* to, 1176
of *Musca domestica* to, 40
Malathion: spray for stored wheat, 489
Malathion toxicity: to fly larvae from cattle feces, 410
Gambusia, 1238
two-spotted spider mite, 1260
Mamestra configurata, 644
Maneb against: blackspot, 420
spider mites and black spot, 61
two-spotted spider mite, 660
Margarodidae, 423
Mediterranean fruit fly, attractants, 30
Megachile (*Eutricharaea*) *rotundata*, nesting sites for, 989
Megaselia sp., 536
Melanoplus bilituratus, 371, 382
birittatus, 170, 209, 376
cuneatus, 382
confusus, 376
femur-rubrum, 209, 1054
infantilis, 372
occidentalis, 373
packardii, 374
Melanotus communis, 869
Melyridae, 148
Menacanthus stramineus, 1053, 1114
Menopon gallinae, 1053, 1114
gallinae populations, 74
Mesochorus diversicolor, 221
nigripes, 196
sp., 221
Mesogramma marginata, 887, 891
Metabolism of: Compound III by house flies, 231
P^{32}-labeled dimethoate, 733
ronnel in Madeira cockroach, 224
Metaldehyde against: European brown snail, 152
slugs, 778
Metator pardalinus, 374
Metcalfa pruinosa, 1104
Methocel against: sugar-beet root maggot, 896
two-spotted spider mite, 511
Methods: for airplane spraying of malathion, 600
Methods: for bioassay of insecticide residue with *Drosophila*, 823
Methods for comparing: Co-Ral, ronnel, and Ruelene against screw worm, 941
DOWCO 109 and DOWCO 105 in control of cattle grubs, 79
effectiveness of lindane, malathion, methoxychlor, and pyrethrins-piperonyl butoxide against hairy spider beetle, 397

fecundity and fertility in plum curculio, 283
house fly bioassay, 343
methods of caging and transferring techniques on aphid mortality, 101
organophosphate seed treatment with others, 895
relative control of ear ticks and cattle grubs, 814
strains of German cockroach, 748
susceptibility of flies and to insecticides, 803
treatments of dimethoate on cattle grubs, 252
Methods: for conducting laboratory tests of residues against house flies, 386
Methods for controlling: Angoumois grain moth, 479
Methods for controlling aphids: on cantaloupes, 598
on Easter lily, 595
Methods for controlling: cattle grub with Ruelene, 278
corn stem weevil and fall armyworm, 546
ear tick, 814
face flies, 434
flower thrips in roses, 234
greenbug with Di-Syston, 606
green peach aphid, 1003
Hippelates, 636
insects and mites on mint, 645
lesser peach tree borer, 799
mimosa webworm, 523
pea enation mosaic, 161
peach tree borer, 669
scrub typhus, 654
spider mites and black spot, 61
sticktight flea, 1212
sugar-beet maggot, 178
tadpole shrimp, 38
tarnished plant bug, 244
yellowjacket, 628
Methods: for culture of entomophagous insects, 612
Methods: for delaying selection of acaricide resistant strains of European red mite, 439
Methods for determining: acaricidal activity of cellulose polymers, 511
action of phosphates against *Diprion*, 1061
aerial spray effectiveness against gypsy moth, 315
best insecticides against Mexican fruit fly, 666
biological phenomena of boll weevils 418
boll weevil longevity, 964
changes in metabolites of *Blattella* from insecticides, 1022
conditions for oviposition of army cutworm, 273
damage by insecticides or lime to rutabagas, 194
dehydrogenase activity in *Aedes aegypti*, 513
diapause in sugarcane borer, 285
difference in citrus red mite on navel and Valencia oranges and lemons, 55
distribution of foragers from honey bee colonies, 431
Methods for determining effect of: acaracide-fungicide sprays on roses, 660
antibiotics on two-spotted spider mite, 122
combination sprays on roses, 420
DDT on cabbage caterpillar, 476
of DDT on metabolism of Aedes aegypti, 461
dietary Guthion on baby chicks, 1229
distance on distribution of foraging honey bees, 929
European corn borer on potatoes, 782
migration, temperature, and precipitation on thrips, 77
mites on corn, 608
temperature and photoperiod on voltinism of European corn borer, 551
toxaphene-DDT and calcium arsenate on cotton, 309
Methods for determining effectiveness of: bacteria and insecticides against tobacco pests, 1112
barn fogging by farmers, 862
chemically treated screens against punkies, 578
chemicals on cattle grubs, 203
early season-spray on overwintered boll weevils, 622
insecticides for thrips control, 200
parasites against orange-striped oakworm, 962
soil insecticides, 601
treated bags against corn earworm and fall armyworm, 587
volatile pesticide in relation to temperature and exposure time, 1121
Methods for determining: efficacy of systemic insecticides 1174
efficiency of virus and bacteria to control cabbage looper, 699
egg deposit of *Aedes* in colored medium, 1265
egg parasitism and larval habits of orange-striped oakworm, 502
esterase inhibiton in poisoning of flies, 1161
evaluation of insecticides against horn fly, 392
Methods for determining: factors influencing phorate-treated cotton seed, 855
factors of light trap collections, 305
Methods for determining: feces toxicity to fly larvae, 406, 409
heptachlor residues, 1264
house fly absorption and metabolism, 231
house fly toxicity ratio, 581
if wing movement of green peach aphid would affect lettuce mosaic virus, 1136
influence of insecticides and solvents on beet seedling emergence, 182
influence of water and food on larvae of *Coleomegilla*, 194
inheritance of resistance to endrin in boll weevil, 311
injury to alfalfa by aphids, 615
insect resistance in eye gnat, 695
insecticide hydrolysis by house fly, 239
lindane residues in chickens and eggs, 487
lysine and alanine as mosquito attractants, 317
metabolism of C^{14} labeled DDT, 9
metabolism of dimethoate, 733
orchard-mite resistance to Kelthane, 14
persistence of insecticide residues, 718
phorate uptake by cotton plants, 411
plant characteristics of *Phaseolus*, 705
plant resistance in sweetclover, 1157
potato response to Guthion, 839
properties of esters of phosphonic and phosphinic acids, 955
range of pink bollworm traps, 788
Methods for determining relationship: between Angoumois grain moth and microflora, 1032
of loopers to precipitation, temperature, and polyhedrosis virus, 796
of plant type to corn earworm control, 689
Methods, for determining residual activity: of insecticides against eye gnat, 866
Phosdrin, 508
Methods for determining residues on oranges from control of orangeworms, 455
Methods for determining resistance: in bean lines to potato leafhopper, 846
of pickleworm to, 1191
to carbamate insecticides in the house fly 132
to DDT by apple maggot, 880
to malathion by *Culex*, 1176
to organic insecticides by codling moth, 1128
Methods for determining: responses of cotton to boll weevil, 980
ribonucleic acid in house fly ovary, 651
role of insecticide-fertilizer on sugar beets, 720
seasonal incidence of diapause in boll weevil, 1214
spread of internal cork of sweet potato, 125
stability of allethrin, 731
stable fly tolerance to insecticide residues, 528
Methods for determining susceptibility: of corn earworm larvae to DDT, 1203
of eye gnat to residual insecticides, 130
of grains to army cutworm, 250
of pear psylla to dormant sprays, 1000
Methods for determining: synergism of carbamate insecticides, 150, 1243
timing spray program for spruce budworm, 997
Methods for determining toxicity of: chick droppings to house fly larvae, 573
enzyne fractions of *Bacillus larvae*, 773
fumigants to cadelle, 452
insecticides to red flour beetle, 437
protective sprays for stored wheat, 490
Sevin to insect species, 402
Methods for determining: transformation of data from insect control experiments to analysis of variance, 860
uptake and metabolism of parathion by insect eggs, 187
uptake of insecticides by cotton plants, 569
variation in stool size of sugarcane froghopper numph, 771
variation of response to potato leafhopper in *Phaseolus*, 1078
whether droppings from insecticide-fed cattle would be toxic to face fly larvae, 406
Methods for: developing indices of seasonal populations of corn earworm, 692
elucidating absorption, transport, metabolism, excretion in Madeira cockroach, 225
establishing systemic activity of dimethoate as a cottonseed treatment, 1132
Methods for evaluating: absorption and translocation of phorate, 379

acceptance of baits by imported fire ants, 70
adhesives for traps, 1011
aphid control on sugar beets, 758
beans for resistance to bean beetle, 1019
chemical and microbial control of cabbage looper, 141
control of cattle grubs and horn flies with Co-Ral, 208
granular insecticidal formulations against northern corn rootworm, 833
insect resistance in certain vegetables, 156
insecticides on green peach aphid, 280
insecticides to control millipedes, 197
macrochelid mites as predators, 702
materials for control of European brown snail, 153
sprays against *Lecanium*, 1165
phorate against potato insects, 1217
resistance to insects in sweet corn, 1248
results of dieldrin in spray oil on bananas, 1073
substrate moisture and temperature on phorate-treated cotton seed, 296
toxicity of soil insecticides, 1056
Methods for experimenting: on control of poultry lice, 1114
with insecticides against sugar-beet root aphid, 1151
Methods for extracting: pine resin for rearing and confining beetles, 360
Methods for field testing: in control of sugarcane borer, 1153, 1155
for pink bollworm control, 972
insecticides against spotted alfalfa aphid, 1144
Methods for: forestalling tree killing of Recurvaria, 349
freeing fruit of eggs or larvae before storage, 917
increasing *Megachile (Eutricharaea) rotundata* populations, 990
Methods for investigating: control of slugs in pastures, 778
effect of fumigation on corn seeds, 764
factors influencing pupation and moth emergence in pink bollworm, 908
hazards in use of insecticides against Dutch elm disease, 127
insecticides against grape berry moth, 853
relationship between Ali-E activity and effects of carbamates, 793
relationship between caterpillars and their parasites, 889
thrips on onions, 1254
toxicity of sprays to honey bee, 1008
Methods for obtaining: information on translocation, deposition, and stability of systemics in conifers, 159
results of insecticides against stored-product insects, 236
Methods for: preventing damage to trees by suppressing citrus rust mite, 977
producing artificial infestations of northern cattle grubs, 84
reaching ecological approach to insecticides, 109
rearing bollworm, 949
rearing lettuce root aphid, 1256
screening insecticides against *Hippelates*, 264
Methods for studying absorption and translocation of: dimethoate in cotton plant, 1206
Di-Syston by cotton plants, 1228
Methods for studying: acaracidal activity against two-spotted spider mite, 166
biologically active phorate residues, 827
control of alfalfa weevil, 743
control of resistant house fly, 114
crosses in corn for resistance, 784
diets of sugarcane borer, 258
dosage levels and seasonal behavior of insecticides against European pine shoot moth, 987
early-season thrips control on cotton, 974
effect of corn borer on stalk rot, 850
effect of Tedion on two-spotted spider mite, 168
eggs of two-spotted spider mite, 591
factors affecting apple aphid, 1034
house-fly resistance to Malathion, 41
metabolic fate of insecticide, 389
metabolism of DDT by boll weevils, 299
natural control of aphids, 885
overwintering habits of *Homalodisca*, 810
rainfall effect on grasshoppers, 383
residues of Phosdrin on alfalfa, 209
sorghum host of southwestern corn borer, 16
sorption of fumigants by wheat, 261
spray oils on citrus, 333
susceptibility of Ali-E and ChE activity of house fly, 103
ticks of Turkey, 91
Methods for: summarizing results from germination tests with seeds exposed to fumigants, 22
tagging boll weevil with P^{32}, 1198
Methods for testing: effect of curly top and cucumber mosaic on cantaloupes, 970
insecticides against apple maggot, 526
insecticides against grasshoppers, 170
phosphorodithioic acid esters on boll weevil, 813
resistance in *Nicotiana* to green peach aphid, 946
three compounds against horn flies and stable flies, 1047
wetting agents on lychee, 1075
Methods: for utilizing nuclear polyhedrosis virus in control of cabbage looper, 921
Methoxychlor against: apple maggot, 472
cabbage pests, 357, 476
European pine shoot moth, 987
face fly, 434, 563, 1148
grape berry moth, 853
hairy spider beetle, 397
horn fly, 393
house fly, 138
Mexican fruit fly, 666
stored-product insects, 237
vetch bruchid, 219
Methoxychlor: effect of on milk production, 753
in milk, 871
spray for stored wheat, 489
Methyl bromide: effect of on corn seed, 764
fumigation of small legume seeds with, 21
Methyl chloride: against Japanese beetle, 1059
Methyl demeton: against stored-product insects, 237
Methyl para-oxon: bioassay of, 842
Methyl parathion against: *Blattella*, 1022
boll weevil, 726, 1215
cotton insects, 967, 1012
cotton leaf perforator, 69
overwintered boll weevils, 622
pink bollworm, 193
spotted alfalfa aphid, 1145
stored-product insects, 237
two-spotted spider mite, 166
Methyl Trithion against: aphids on cantaloupes, 598
bloodsucking ectoparasites, 994
broccoli and cabbage pests, 357
cotton insects, 967, 1012
eye gnat, 867
Hippelates, 266
sugarcane borer, 1154
thrips on peanuts, 201
Methyl Trithion: toxicity to *Gambusia*, 1240
Metrazol: against Mexican bean beetle, 600
Mexican bean beetle: cubé against, 599
resistance in beans, 1018
Mexican fruit fly: control of, 666
gamma radiation effect on, 202
malathion agaist, 600
MGK 264 and Repellent 1207: against face fly, 563, 1149
MGK Repellent 326: against face fly, 1149
Microctonus aethiops, 1027
Microplitis alaskensis, 645
plutellae, 889
Mieryphantidae, 149
Milk, recovery of insecticides from, 441
Millipedes, control of, 197
Mimetidae, 149
Mimosa webworm, control of, 523
Mint, control of insects and mites on, 644
Mites: ecological studies on oribatid, 701
effect of control on corn, 608
effects of gibberellin on nutrition, 985
eriophyid, on Bermuda grass, 836
on soybeans, 1024
Monsanto CP-7769 against: grasshoppers, 170
pink bollworm, 973
salt-marsh caterpillar, 1266
stored-product insects, 237
Monsanto CP-10502 against: bloodsucking ectoparasites, 994
cotton aphids, 1262
green peach aphid, 1004
Monsanto CP-10516 against: cotton aphids, 1262
Monsanto CP-11549: toxicity to two-spotted spider mite, 1260
Monsanto CP-11903: toxicity to two-spotted spider mite, 1260
Monsanto CP-12432 against: cotton aphids, 1262
salt-marsh caterpillar, 1266
Monsanto 16226, synergism of, 1243
Mosquito: alanine as attractant, 317
Hercules AC-5727 against, 63
lysine as attractant, 317
rate of oviposition, 807
Mosquito fish, toxicity of insecticides to, 1237
Mosquito larvae, action of insecticides with, 583
Musca autumnalis, 406, 408, 526, 741, 802, 1147
control of, 434
first decade with, 761
susceptibility to insecticides, 803
Musca domestica, 35, 103, 114, 150, 239, 340, 343, 386, 389, 402, 406, 408, 417, 447, 513, 573, 580, 611, 651, 670, 684,

697, 701, 741, 753, 773, 793, 841, 862, 881, 904, 913, 955, 1038, 1054, 1065, 1117, 1161, 1176, 1232, 1250, 1257
genetics of resistance to Malathion, 40
resistance to carbamate insecticides, 132
susceptibility to insecticides, 803
Myzus ascalonicus, 597
persicae, 101, 157, 279, 414, 597, 885, 746, 970, 1003, 1080, 1135, 1217
solani, 597

Nabis ferus, 54
sp , 68
Navel orangeworm in California, 559
Nematocide 18133: against sugarcane borer, 1155
Neodiprion pratti pratti, aerial control of, 809
Nesticidae, 149
Nicotiana, resistance to green peach aphid, 946
Nicotine against aphids and spider mites 288
Nitrogen atmosphere, survival of insects in, 1054
Noctuidae, 273
Nomophila noctuella larvae on douglas-fir, 1258
Northern corn rootworm, insecticidal granules in control of, 833
Nuclear polyhedrosis virus for control of cabbage looper, 47, 921
Nymphalidae, 465, 530
Nysius californicus, 120
raphanus, susceptibility of, 120

Oak skeletonizer in Michigan, 681
Oats, control of aphids on, 883
Obituaries: Stanley Barron Freeborn, 1069
Bentley Ball Fulton, 613
Walter M. Kulash, 400
Wendell Folsom Sellers, 613
Herbert Dwight Smith, 217
Joseph Sanford Wade, 825
Octachlorodipropyl ether, synergism of carbamate insecticides with, 150
Oil sprays, against *Lecanium*, 1165
Oncopeltus fasciatus, 187, 402, 773
piceus, 239
Onions, control of thrips on, 1254
Ooencyrtus kuwanai, 875
in Connecticut, 876
Oppia nova, 702
Orange-striped oakworm: egg parasitism and larval habits of, 502
pupal mortality of, 962
Oranges: citrus red mite on, 55
residues on from control of orangeworms, 455
Orangeworms, residues on oranges from control of, 455
Orchard-mite resistance to Kelthane, 12
Oribatula suramericana, 702
Orius sp., 68
tristicolor, 53
Ornithodoros lahorensis, 91
Orthellia caesarion, 802
Ortho Experimental Lawn Spray: against mites on Bermuda grass, 838
Ostrinia nubilalis, 713, 1248
Oryzaephilus surinamensis, 212
Ostomidae, 451
Otobius megnini, 814
Ovex against: aphids and spider mites, 288
citrus red mite, 56
spider mites and black spot, 61
Oxidus gracilis, 197
Oxyopidae, 149

Paddy borer, insecticides against, 707
Paillotellavirus pieris, 891
Panonychus citri, 55, 977
sp., 1026
ulmi, 439, 918
ulmi, effects of gibberellin on nutrition, 985
Papaipema nebris, 213
Paralobesia viteana, 853
Paramyelois transitella, 559
Para-oxon: bioassay of, 842
hydrolysis by house fly, 239
Parasetigena silvestris, 875
Parathion against: aphids on cantaloupes, 598
arthropods, 819
cabbage looper, 142, 476
citrus red mite, 56
Drosophila and *Musca*, 1038
Egyptian alfalfa weevil, 51
eye gnat, 867
face fly and house fly, 803
grape berry moth, 853
green peach aphid, 280 1004
Hippelates, 266, 697
hornworms, 95
house fly, 138, 387, 1162
insects and mites on mint, 645
lesser peach tree borer, 800
Mexican fruit fly, 666
millipedes, 198
mites on Bermuda grass, 838
mosquito larvae, 584
paddy borer, 707
pea virus diseases, 163
peach tree borer, 668
Pemphigus, 1152
red flour beetle, 437
salt-marsh caterpillar, 1266
Sparganothis sulfurana, 811
spotted alfalfa aphid, 1145
stored-product insects, 237
thrips, 201, 1255
two-spotted spider mite, 166
Parathion: bioassay of, 842
damage to rutabagas, 193
eggs of two-spotted spider mite resistant to, 591
house fly susceptibility to, 904
hydrolysis by house fly, 239
in ecological approach to insecticides, 109
inhibition of house fly Ali-esterase and Cholinesterase by, 103
lethality to honey bee, 1009
loss to soil, 175
residual life of, 1188
residues on oranges, 455
response of red-banded leaf roller to, 88
toxicity to fly larvae from cattle feces 410
toxicity to *Gambusia*, 1238
uptake and metabolism by insect eggs, 187
Paratrechina longicornis, 1065
Paratrioza cockerelli, 1217
Patasson (=*Anaphoidea*) sp., 196
Paulins in fumigation and as storage covers, 270
Pavement ant, against sugar beets, 1063
Pea enation mosaic, control of, 161
Peach tree borer: control of, 668
prevention of, 400
Peach twig borer, cyclical changes in moths and larvae, 933
Peanuts, tobacco thrips on, 200
Pear leaf scorch, relation to European red mite, 918
psylla, control of, 1000
Pectinophora gossypiella, 4, 192, 305, 484, 788, 789, 791, 815, 908, 972, 1057 1107, 1224, 1253, 1261
Pemphigus betae, insecticides against, 1151
bursarius, rearing, 1256
Pentatrichopus fragaefolii, 287
Peppers, green peach aphid on, 279
Pergalumna sp., 702
Perilitus rutilus, 1027
Periplaneta americana, 239, 341, 773, 881 1177
Perthane against: apple maggot, 472
broccoli pests, 357
cabbage caterpillar, 476
cabbage looper, 142, 923
grape berry moth, 853
Mexican fruit fly, 666
201, 1255
Perthane: toxicity to house fly, 574
Pesticide names in U.S.S.R.
Phaeogenes hariolus, 221
Phaltan: against grape berry moth, 853
Phaseolus spp., resistance to potato leafhopper, 1077
vulgaris, plant characterisics of, 705
Phenopelops sp., 702
Phenothiazine, 410
Pherodon menthae, 644
Philaenus leucophthalmus, 209
Phillips R-1207: barn fogging with, 862
Philonthus alumnus, 815
Phlibostroma quadrimaculatum, 373
Pholcidae, 149
Phony peach disease virus, vector of, 810
Phorate: affecting potato yields, 840
Phorate against: aphids, 595, 598, 883, 894
Drosophila and *Musca*, 1038
European corn borer, 782
eye gnat, 867
flower thrips, 233
green peach aphid, 1005
Phorate against insects on: lima beans, 663
potatoes, 663, 1217
sweet corn, 663
Phorate against: leafhopper, 1175
mimosa webworm, 523
northern corn rootworm, 835
salt-marsh caterpillar, 1266
stored-product insects, 237
sugar-beet root maggot, 178
sugarcane borer, 1155
sugarcane rootstock weevil, 302
thrips on cotton, 974
two-spotted spider mites, 421, 660
Phorate: biological activity in chrysanthemums, 827
effect on sugar beet seedlings, 183
emergence of cotton seed treated, 855
lethality to honey bee, 1009
residues in chrysanthemums, 827
uptake by cotton plants, 411, 570
Phorate-treated cotton seeds, 379
Phoresy in *Xenufens*, 465
Phormia spp., 674
Phoroden menthae, 647
Phosdrin: adjuvants increasing residual activity of, 508
Phosdrin against: apple maggot, 472
cabbage looper, 923

green peach aphid, 280, 1004
insects and mites on mint, 645
salt-marsh caterpillar, 1266
spotted alfalfa aphid, 1145
stored-product insects, 237
thrips on peanuts, 201
two-spotted spider mite, 166
Phosdrin: bioassay of, 841
effect of Egyptian alfalfa weevil, 53
hydrolysis by house fly, 239
lethality to honey bee, 1009
residues on alfalfa, 209
residues on oranges, 455
toxicity to house fly from chick droppings, 574
Phosphamidon against: aphids, 598, 883
apple maggot, 472
bloodsucking ectoparasites, 994
broccoli and cabbage pests, 357
codling moth, 1129
cotton aphids, 1262
European corn borer, 782
grasshoppers, 170
green peach aphid, 281, 1005
insects and mites on mint, 645
insects on potatoes, 664
thrips on peanuts, 201
Phosphamidon: lethality to honey bee, 1009
toxicity to house fly from chick droppings, 574
Phosphonic and phosphinic acids: properties of esters of, 955
Phosphoric acid in eggs, 1142
Phosphoric and phosphorodithioic acid fed to hens, 1140
Phostex against: apple maggot, 472
Hippelates, 266
stored-product insects, 237
Phostex: lethality to honey bee, 1009
Phryxe vulgaris, 157, 889
Phyllocoptruta oleivora, 977
Phyllotreta cruciferae, 157, 356
vittata, 157
Physcus flariceps, 445
sp., biology of, 444
testaceus, 445
Pickleworm, resistance of squash to, 1191
Pieris rapae, 157, 475, 889, 923
Pine resin vapors, toxicity of, 359
Pine resins, fumigant toxicity of, 365
Pine sawfly: aerial control of, 809
introduced, control of, 159
Pink bollworm: activity of, subjected to burial, 789
artificial media for, 4
control by cotton stalk shredders, 1057
effect of larval diet on diapause of, 1107
emergence of overwintered, 192
factors influencing pupation, 908
fecundity and longevity of female, 1224
field tests for control of, 972
host plant resistance to, 484
predators and scavengers of, 815
range of traps for, 788
stalk shredders and cutters for control of, 791
Pinus strobus: against *Diprion similis*, 1061
Chipman R-6199 in, related to control of introduced pine sawfly, 159
Piperonyl butoxide, synergism of, 1243
Pirazinon, against apple maggot, 472
Pisauridae, 149
Plagiognathus chrysanthemi, 244
politus, 244
Plants, as virus reservoirs, 506
Platynota sp., 1073
Platynothrus peltifer, 702
Plodia interpunctella, 212
rearing medium for, 812
Plum curculio: fecundity and fertility of, 283
in controlled atmosphere storage, 915
soil insecticides against, 1056
Plutella maculipennis, 157, 475, 889
Pnigalio maculipes, 684
Podisus sp., 503
Polistes annularis, 94
bellicosus, 94
exclamans, 94
fuscatus, 94
hunteri, 94
metricus, 94
rubiginosus, 94
Polydesmi, 148
Polyphylla decemlineata, 644
Popillia japonica, 399, 1054, 1059
Porthetria dispar, 566, 874, 1010
aerial spray tests against, 315
Potato: control of green peach aphid on, 1003
response to Guthion, 839
systemic insecticides on, 663
Potato insects, phorate against, 1217
Potato leafhopper: *Phaseolus vulgaris* associated with, 705
resistance in bean lines, 846
resistance to in bean and cowpea, 1077
Potosan, toxicity to fly larvae from cattle feces, 409
Poultry lice, control of, 1114
Praon sp., 886
Prodenia exidania, 187
ornithogalli, 211
Prolan: against house fly, 138
Proline: metabolism in poisoned German cockroaches, 198
Pronematus sp., 1026
Protoparce quinquemaculata, 93, 1112
sexta, 93, 1112
Psallus seriatus, 379, 966, 972, 1131
Pseudaletia unipuncta, 209, 431
Pseudococcidae, in greenhouses, 820
Pseudosuccinea columella, 1
Pseudotritia ardua, 702
Psilodryinus typhlocybae, 1105
Psocoptera, of Arizona, 332
Psoloessa delicatula, 382
Psylla pyricola, 1010
control of, 1000
Pteromalidae, 349
Psylliodes punctulata, 157
Ptinus villiger, lindane, malathion, methoxychlor, and pyrethrins-piperonyl butoxide against, 397
Punkies, chemically treated screens against, 578
Pygostolus flacatus, 1027
Pyrausta nubilalis, 213, 257, 267, 398, 664, 782, 784, 850
voltinism of, 550
Pyrausta orphisalis, 644
Pyrenone: against cabbage caterpillar, 477
spray for stored wheat, 489
Pyrethrins against: body lice, 649
face flies, 563
Pyrethrins-piperonyl butoxide, against hairy spider beetle, 397
Pyrethroids, effectiveness of synthetic, 1250
Pyrethrum: against stored-product insects, 237
spray for stored wheat, 489
Pyrolan: against house fly, 132, 152
toxicity to house fly, 574
Pythium debaryanum, 856
spp., 855
ultimum, 856

R-11: barn fogging with, 862
R-326: barn fogging with, 862
Rabbits, insecticidal effectiveness of chemicals administered to, 993
Rachoplusia ou, 478
Radioactive fumigants, apparatus for, 808
Rangeland vegetation losses from grasshoppers, 369
Recurvaria milleri, 347
starki, 347
Red-banded leaf roller, TDE toxicity to, 88
Red flour beetle, toxicity of insecticides to, 437
Red rust thrips, control on bananas, 1071
Retaining pen for insect larvae, 210
Reticulitermes flaripes, 1055
Rhagoletis pomonella, 467, 915, 1056
insecticides against, 526
resistance to DDT, 880
Rhipicephalus bursa, 91
sanguineus, 91
Rhizoctonia solani, 856
Rhodnius prolixus, 1232
Rhopalosiphum fitchii, 883
maidis, 194
pseudobrassicae, 885
Rhyacionia buoliana, 987, 1014
Rhyzopertha dominica, 212
Ribonucleic acid in house fly ovary, 651
Rice, systemic insecticides on, 937
Rice water weevil, control of, 710
Rohn & Haas C-140: against green peach aphid, 1004
Ronnel: absorption, metabolism, and excretion of by Madeira cockroach, 224
Ronnel against: aphids and spider mites, 288
aphids on cantaloupes, 598
cabbage caterpillar, 476
cattle grubs, 79
ear tick, 814
eye gnat, 867
face flies, 434, 563
green peach aphid, 1005
Hippelates, 266
hog louse, 821
house flies, 114, 138, 387
Mexican fruit fly, 666
poultry lice, 1114
screw worm, 941
stored-product insects, 237
thrips, 201, 1255
Ronnel: barn fogging with, 862
Ronnel toxicity to: fly larvae from cattle feces, 406, 410
poultry, 1118
Roses: treatment against spider mites, 1255
acaracide-fungicide sprays on, 659
combination sprays on, 420
control of spider mites and black spot on, 61
treatments against flower thrips in, 233
Rotenone: against green peach aphid, 281
in ecological approach to insecticides, 109
toxicity to fly larvae, 410
Ruelene against: bloodsucking ectoparasites, 994
cattle grubs, 203, 278, 430
ear tick, 814

horn fly, 1101
house flies, 386
poultry lice, 1114
screw worm, 941
Ruelene: from poultry tissues, 1140
recovery from milk, 442
residues in tissues and eggs of poultry, 457
toxicity to house fly from chick droppings, 574
toxicity to poultry, 1118
Rumex spp., 1064
Russian entomological journal, 1068
Rusty plum aphid, insecticides against, 204
Rutabagas, scabbing of, 193
Ryanex: toxicity to fly larvae, 409
Ryania against: apple maggot, 472
codling moth, 1129

Salticidae, 149
Salt-marsh caterpillar, insecticides against, 1266
Sanninoidea exitiosa, 187, 400, 668
Santomerse: against spider mites and black spot, 61
Sarchophaga aldrichi, 221
(*Sarcodexia*) *lambens*, 536
latisetosa, 802
lherminiera, 802
querula, 802
sp., 536, 674
Sarcophagidae, 222
Scaphoideus luteolus, P^{32} in biological studies of, 1260
Scheloribates laevigatus, 701
Schoenobius incertulas, insecticides against, 707
Schradan against: aphids on Easter lily, 595
cotton aphids, 1262
two-spotted spider mite, 166, 1260
Sciomyzidae, 1
Scolytus multistriatus, 127
feeding deterrents against, 293
Screw worm, Co-Ral, ronnel, and Ruelene against, 941
Scrub typhus, chigger vectors of, 654
SD-4294: against northern corn rootworm, 833
SD-4360: against northern corn rootworm, 833
SD-4402 against: cabbage caterpillar, 477
Hippelates, 266
sugarcane borer, 1154
SD 4402: bioassay of, 845
Seeds, insecticides against pests of, 235
Sejus sp., 1026
Selenophorus fatuus, 815
Sepedon macropus, control for liver fluke snail, 1
Sesamex: against insect species, 401
Sevin against: apple maggot, 472, 527
bloodsucking ectoparasites, 994
cabbage looper, 142, 477
codling moth, 1129
cotton insects, 967, 1012
cotton leaf perforator, 69
Drosophila and *Musca*, 1038
European corn borer, 782
European pine shoot moth, 987
face flies, 563
grape berry moth, 853
grasshoppers, 170
green peach aphid, 280, 1004
gypsy moth, 315
house fly, 132, 152
insects on lima beans, 663
lesser peach tree borer, 800
Lygus, 1261
navel orangeworm, 559
overwintered boll weevils, 623
pink bollworm, 972
poultry lice, 1114
salt-marsh caterpillar, 1266
Sparganothis sulfurana, 811
spotted alfalfa aphid, 1146
stored-product insects, 237
sugarcane borer, 1154
sugarcane rootstock weevil, 302
thrips, 201, 1255
Triops, 39
two-spotted spider mite, 122
webworms, 799
Sevin: bioassay of, 842
bollworm resistance to, 951
effect on honey bees, 566
inhibiting aliphatic esterase activity, 793
lethality to honey bee, 1009
recovery from milk, 442
resistance of pickleworm to, 1191
synergism of, 1243
Sevin toxicity to: fly larvae from cattle feces, 409
house fly, 574
insect species, 401
SF60: against European pine shoot moth, 987
Shaft louse populations, 74
Sheep, dimethoate in, 733
Shell 1836: against *Diprion*, 1061
Shell SD-2244: against cotton aphids, 1262
Shell 3562: against *Diprion*, 1061
Shell SD-3562: on rice, 937
Shell BAS 3562: against aphids, 883
Shell SD 3562 against: bloodsucking ectoparasites, 994
cotton aphids, 1262
grasshoppers, 170
house flies, 386
stored-product insects, 237
Shell BAS 4092: against stored-product insects, 237
Shell SD-4092: against cotton aphids, 1262
Shell BAS-4294: against cotton aphids, 1262
Shell SD-4329: against cotton aphids, 1262
Shell SD-4402 against: budworms and hornworms, 1112
cotton insects, 967, 1012
cotton leaf perforator, 70
grasshoppers, 170
thrips, 201, 1255
SD-4402: toxicity to *Gambusia*, 1240
Shell BAS-4475: against cotton aphids, 1262
Shell SD-5533: against cotton insects, 966, 1012, 1262
Shell SD-5539 against: bloodsucking ectoparasites, 994
cotton insects, 966, 1012, 1262
Silikil: against face flies, 563
Simuliid larvae, chemical control of, 607
Sindar Corp. A-1634: against salt-marsh caterpillar, 1266
Sinea sp., 68
Siphona irritans, 208, 392, 408
Sitona cylindricollis, European *Sitona* against, 1026
hispidula, 543, 869
spp., European, against *S. cylindricollis*, 1026
Sitophilus granarius, 212, 238, 451, 1126
oryzae, 212, 238, 481, 490, 900
sasakii, 261
Sitotroga cerealella, 900
and storage fungi, 1032
control of, 479
Sitotroga sp., 196
Six-spotted leafhopper control, 1173
Slugs, control of in pastures, 778
Sogata orizicola, 941
Soil toxicants, against Mexican fruit fly, 666
Soils, persistence of residues in, 517
Solenopsis geminata, 1065
saevissima v. *richteri*, 45, 146, 1096
saevissima v. *richteri*, baits against, 70
Solenoptes capillatus, 1052
Sorghum as host of southwestern corn borer, 16
Sorption of fumigants by wheat, 261
Southwestern corn borer, sorghum as host, 16
Sovaspray Oil No. 3, against grape berry moth, 853
Soybeans, mites on, 1024
Spanogonicus albofasciatus, 974
Sparganothis sulfurana, control of, 811
Sphaerophoria cylindrica, 887, 891
menthastri, 887, 891
robusta, 887, 891
Spharagemon equale, 377
Spider mites control of: on strawberries, 287
with acaricide-fungicides, 61
Spider mites: culture and acaricide treatments on roses, 1255
Spilonota ocellana, 527
Spissistilus festinus, 800
Spodoptera exigua, 192, 1243
Spotted alfalfa aphid, control of, 1144
Spray oil deposit on citrus, 333
Sprayer: modification for small plots, 601
portable, 604
Spruce budworm, eggs per egg mass, 1064
in the Adirondacks, 811
timing aerial spray programs, 996
Squash, resistance to pickleworm, 1191
Stable flies: control of, 1047
tolerance to insecticide residues, 528
Stalk rot, interaction in corn, 850
Staphylinidae, 148
Stauffer R-1505 and R-1571: toxicity to two-spotted spider mite, 1260
Stauffer R-2968: against aphids, 893
Stenomorphus californicus, 815
Sticktight flea, control on chickens, 1212
Stomoxys calcitrans, 408, 447, 741, 753, 862, 1046, 1047
Strawberries, aphids and spider mites on, 287
Strobane against: apple maggot, 472
Blattella germanica, 1022
cabbage caterpillar, 476
cotton insects, 966, 1012
cotton leaf perforator, 70
Strobane: bollworm resistance to, 951
toxicity to house fly from chick droppings, 574
Sturmia scutellata, 875
Suction sampling of insect populations, 394
Sugar-beet: root aphid, insecticides against, 1151
root maggot, control of, 178, 895
seedlings, emergence of, 181
seedlings, insecticides on 181, 895
Sugar beets: aphid control on, 758
control of webworms in, 799

Journal of
ECONOMIC ENTOMOLOGY

Published by the
ENTOMOLOGICAL SOCIETY OF AMERICA

VOLUME 54 · 1961

JOURNAL OF ECONOMIC ENTOMOLOGY

Published by

ENTOMOLOGICAL SOCIETY OF AMERICA

R. H. NELSON, *Executive Secretary*, 4603 Calvert Road, College Park, Md.

F. W. POOS, *Editor*, 4603 Calvert Road,
College Park, Md.

EDITORIAL BOARD

D. E. HOWELL, Stillwater, Okla. (Section D, 1961)

G. J. HAEUSSLER, Beltsville, Md. (Section C, 1962)

RUTH L. BUSBEY, Beltsville, Md. (Section F, 1963)

C. R. JORDAN, JR., Athens, Ga. (Section E, 1964)

R. D. O'BRIEN, Ithaca, N.Y. (Section B, 1965)

A bimonthly journal published on the 15th of February, April, June, August, October, and December, devoted to the interests of economic entomology. The authors are entirely responsible for statements in the *Journal*, whether of fact or opinion.

TERMS OF SUBSCRIPTION. Non-members in North America and U. S. possessions—$15.00 per year; elsewhere—$15.00 plus 60¢ postage. Single copies $3.00. **Deliveries overseas** are not guaranteed and foreign mailings are made at the subscriber's risk.

A single order for the Journal of Economic Entomology and the Annals of the Entomological Society of America, *if sent to the same address*, may be obtained at a **Combination Price** of $27.00 per year, domestic; $28.20 foreign.

Lost Numbers. Missing numbers cannot be supplied free of charge unless notice is received within 60 days after the appearance of issues concerned.

Back Numbers. The Executive Secretary will be glad to quote prices upon request.

REPRINTS. No gratis copies are supplied. A schedule of prices which will apply to orders received before the *Journal* is printed, and an order form are sent with proof. For price schedule see Vol. 7, No. 1 March, 1961 Bulletin of the Entomological Society of America, or page 214 of Vol. 54(1) of the *Journal*.

BUSINESS COMMUNICATIONS of the Society and **SUBSCRIPTIONS AND MATTERS PERTAINING TO ADVERTISEMENTS** should be sent to the Executive Secretary, Entomological Society of America, 4603 Calvert Road, College Park, Md. Change of address must reach the office of the Executive Secretary 5 days prior to the month of issue to be effective for that month. Members should make use of postal regulations providing for forwarding of second class mail by guaranteeing postage upon delivery.

ALL MANUSCRIPTS and other copy for the *Journal* should be addressed to the Executive Secretary. Prompt publication of acceptable matter may be secured by payment of partial cost of printing and engraving ($20.00 per page plus cost of engravings with additional charge for excessive tabular matter). Cost of engravings in excess of $15.00, for each eight printed pages or major fraction thereof, will be charged to the author. Before preparing manuscripts for publication in the *Journal*, authors are urged to consult the Publication Policies and Manuscript Rules and Suggestions published in the Bulletin of the Entomological Society of America, Vol. 7(2):59-62, June, 1961.

ENTOMOLOGICAL SOCIETY OF AMERICA

OFFICERS FOR 1961

President—F. S. ARANT, Auburn, Alabama

President-elect—ROBERT GLEN, Ottawa, Ontario

Executive Secretary—R. H. NELSON, 4603 Calvert Road, College Park, Maryland

GOVERNING BOARD

F. S. ARANT, Auburn, Alabama (1962)

R. L. BEARD, New Haven, Conn. (B, 1963)
W. J. BROWN, Ottawa, Ontario (A, 1963)
R. H. DAVIDSON, Columbus, Ohio (North Central, 1963)
ROBERT GLEN, Ottawa, Ontario (1963)
ROY HANSBERRY, Modesto, Calif. (F, 1961)
M. P. JONES, Arlington, Va. (1961)
D. R. LINDSAY, Bethesda, Md. (D, 1962)
C. M. MEADOWS, Waco, Texas (Southwestern, 1961)
R. H. NELSON, College Park, Md. (non-voting)
L. D. NEWSOM, Baton Rouge, La. (Southeastern, 1962)
C. B. PHILIP, Hamilton, Mont. (Pacific, 1962)
R. W. SHERMAN, Washington, D. C. (E, 1962)
E. A. STEINHAUS, Berkeley, Calif. (C, 1961)
NEELY TURNER, New Haven, Conn. (Eastern, 1961)

* Section or Branch represented and year term expires shown in parentheses.

Branch Chairmen

RAY F. SMITH, Berkeley, Calif.—(Pacific Branch)
CARROLL N. SMITH, Orlando, Fla.—(Southeastern Branch)
J. M. GRAYSON, Blacksburg, Va.—(Eastern Branch)
L. K. CUTKOMP, St. Paul, Minn.—(North Central Branch)
SHERMAN W. CLARK, Houston, Texas—(Southwestern Branch)

Branch Chairmen-Elect

S. C. JONES, Corvallis, Oregon—(Pacific Branch)
R. J. KOWAL, Asheville, N. C.—(Southeastern Branch)
HOWARD BAKER, Beltsville, Md.—(Eastern Branch)
ROY W. RINGS, Wooster, Ohio—(North Central Branch)
MANNING PRICE, College Station, Texas—(Southwestern Branch)

Branch Secretaries

H. H. KEIFER, Sacramento, Calif.—(Pacific Branch)
JOHN S. ROUSSELL, Baton Rouge, La.—(Southeastern Branch)
L. G. MERRILL, JR., New Brunswick, N. J.—(Eastern Branch)
G. E. GUYER, East Lansing, Mich.—(North Central Branch)
A. C. GUNTER, Dallas, Texas—(Southwestern Branch)

CONTENTS

ABUL-HAB, JALIL K., and E. M. STAFFORD—Studies of the Eggs of a Strain of Two-Spotted Spider Mite, *Tetranychus telarius*, Resistant to Parathion .....(June) 591

ADKISSON, PERRY L.—Effect of Larval Diet on the Seasonal Occurrence of Diapause in the Pink Bollworm .....(Dec.) 1107

ADKISSON, PERRY L.—Fecundity and Longevity of the Adult Female Pink Bollworm Reared on Natural and Synthetic Diets.....(Dec.) 1224

ADKISSON, PERRY L., see D. K. REED.....(June) 484

ADKISSON, P. L., see H. M. GRAHAM....(Sci. Note, Oct.) 1057

ADLER, V. E., see C. S. LOFGREN.....(Feb.) 45

AGOSIN, M., D. MICHAELI, R. MISKUS, S. NAGASAWA, and W. M. HOSKINS—A New DDT-metabolizing Enzyme in the German Cockroach.....(Apr.) 340

AL-AZAWI, ABDULLA F., DALE M. NORRIS, JR., and JOHN E. CASIDA—Hazards Associated with the Implantation of Tetram into Elm Trees for Dutch Elm Disease Control.....(Feb.) 127

ALLEN, NORMAN, see C. S. CREIGHTON.....(Dec.) 1112

ALLEN, T. C., G. R. ESENTHER, and R. D. SHENEFELT—Concrete-Insecticide Mixtures Toxic to Termites.....(Sci. Note, Oct.) 1055

ALLEN, W. R., W. L. ASKEW, and K. SCHREIBER—Insecticidal Control of the Sugar-Beet Root Maggot and Yield of Sugar Beets.....(Feb.) 178

ALLEN, W. R., W. L. ASKEW, and K. SCHREIBER—Effect of Insecticide Fertilizer Mixtures and Seed Treatments on Emergence of Sugar Beet Seedlings.....(Feb.) 181

ALLER, H. E., and J. E. DEWEY—Adjuvants Increasing the Residual Activity of Phosdrin.....(June) 508

ALLER, H. E., and J. A. NAEGELE—Acaricidal Activity of Cellulose Polymers.....(June) 511

ANTHONY, DARRELL W., NORMAN W. HOOVEN, and OTELIA BODENSTEIN—Toxicity to Face Fly and House Fly Larvae of Feces from Insecticide-Fed Cattle..(June) 406

ANDERSON, DONALD L., see PETER C. STEVE.....(Dec.) 1229

ANDERSON, MYRON A., J. T. SCHULZ, and E. T. HIBBS—Biological Activity and Localization of Phorate Residue Toxins in Soil-Drench Treated Chrysanthemums.....(Oct.) 827

ANDERSON, NORMAN L.—Seasonal Losses in Rangeland Vegetation Due to Grasshoppers.....(Apr.) 369

APPLE, J. W.—Appraisal of Insecticidal Granules in the Row against Damage by the Northern Corn Rootworm.....(Oct.) 833

APPLE, JAMES W., see STANLEY D. BECK.....(June) 550

ARAKAWA, K. Y., see I. M. HALL.....(Feb.) 141

ARBUTHNOT, K. D., see JAMES R. GIFFORD.....(Feb.) 16

ARNDT, R. G., see R. G. STRONG.....(June) 489

ARTHUR, B. W., see H. W. DOROUGH.....(Feb.) 25, 97

ARTHUR, B. W., see J. A. TIMMERMAN, JR.....(June) 441

ARTHUR, B. W., see J. R. BUTTRAM.....(June) 446, 456

ARTHUR, B. W., see H. W. DOROUGH.....(Oct.) 993

ARTHUR, B. W., see H. W. DOROUGH.....(Dec.) 1117, 1140

ARTHUR, B. W., see U. E. BRADY, JR.....(Dec.) 1232

ASKEW, W. L., see W. R. ALLEN.....(Feb.) 178, 181

ASQUITH, DEAN—Methods of Delaying Selection of Acaricide Resistant Strains of the European Red Mite.....(June) 439

ATKINS, E. L., JR., R. C. BLINN, T. R. FUKUTO, and F. A. GUNTHER—Residues on Oranges Resulting from the Use of DDT, Parathion, Phosdrin, and TDE for the Control of Orangeworms.....(June) 455

AYERS, ED L., see L. F. STEINER.....(Feb.) 30

BAILEY, J. C., see H. A. DEAN.....(Apr.) 333

BAILEY, JACK C., see H. A. DEAN.....(Oct.) 952

BAILEY, JACK C., see H. A. DEAN.....(Dec.) 1104

BAKER, J. E., and W. A. CONNELL—Mites on Soybeans in Delaware.....(Oct.) 1024

BARTHEL, W. F., see C. S. LOFGREN.....(Feb.) 45

BARTLETT, F. J., and C. S. LOFGREN—Field Studies with Baits against *Solenopsis saevissima* v. *richteri*, the Imported Fire Ant.....(Feb.) 70

BARTLETT, F. J., see C. S. LOFGREN.....(Dec.) 1096

BAUMAN, L. F., see C. C. BLICKENSTAFF.....(June) 587

BEAN, J. L.—The Use of Balsam Fir Shoot Elongation for Timing Spruce Budworm Aerial Spray Programs in the Lake States.....(Oct.) 996

BEAN, JAMES L.—A Method for Estimating the Number of Spruce Budworm Eggs per Egg Mass.....(Sci. Note, Oct.) 1064

BECK, STANLEY D., and JAMES W. APPLE—Effects of Temperature and Photoperiod on Voltinism of Geographical Populations of the European Corn Borer, *Pyrausta nubilalis*.....(June) 550

BERGEN, P., see A. M. HARPER.....(Oct.) 895

BERLIN, J., see P. A. DAHM.....(Apr.) 343

BIBBY, F. F.—Notes on Miscellaneous Insects of Arizona.....(Apr.) 324

BIGLEY, WALTER S., and FREDERICK W. PLAPP, JR.—Esterase Activity and Susceptibility to Parathion at Different Stages in the Life Cycle of Organophosphorus-Resistant and Susceptible House Flies..(Oct.) 904

BIGLEY, WALTER S., see FREDERICK W. PLAPP, JR...(Feb.) 103

BIGLEY, WALTER S., see FREDERICK W. PLAPP, JR. (Apr.) 389

BIGLEY, WALTER S., see FREDERICK W. PLAPP, JR. (Aug.) 793

BLAKESLEE, THEODORE E., see LAWRENCE JOHNSTON.....(June) 528

BLEAK, E. E., see M. W. NIELSON.....(Sci. Note, Aug.) 800

BLICKENSTAFF, C. C., and L. F. BAUMAN—Treated Bags for Control of the Corn Earworm and Fall Armyworm.....(June) 587

BLICKLE, R. L.—Parasites of the Face Fly, *Musca autumnalis*, in New Hampshire.....(Sci. Note, Aug.) 802

BLINN, R. C., see E. L. ATKINS, JR.....(June) 455

BOBB, MARVIN L.—Control of the Lesser Peach Tree Borer in Virginia.....(Sci. Note, Aug.) 799

BODENSTEIN, OTELIA, see DARRELL W. ANTHONY..(June) 406

BODENSTEIN, O. F., see J. H. FALES.....(Dec.) 1147

BOND, E. J., and H. A. U. MONRO—The Toxicity of Various Fumigants to the Cadelle, *Tenebroides mauritanicus*.....(June) 451

BOND, E. J., and F. CALL—Apparatus for Treating Insects with Radioactive Fumigants.....(Sci. Note, Aug.) 808

BOOK REVIEWS.....116, 215, 826, 614, 1068

BOSWELL, A. L., see THOMAS J. HENNEBERRY..(Feb.) 61, 168

BOSWELL, A. L., see T. J. HENNEBERRY.....(June) 420

BOTTGER, G. T., and A. N. SPARKS—Laboratory Tests with Toxaphene, DDT, and Sevin against *Lygus hesperus* on Cotton.....(Sci. Note, Dec.) 1261

BOWEN, MYLES F.—Efficient Utilization of Paulins in Fumigation and as Covers for the Protection of Storage.....(Apr.) 270

BOWERY, T. G., see F. R. LAWSON.....(Feb.) 93

BOWERY, T. G., see W. V. CAMPBELL.....(Aug.) 743

BOWLING, C. C.—Chemical Control of the Rice Water Weevil.....(Aug.) 710

BOWLING, C. C.—Tests with Systemic Insecticides on Rice.....(Oct.) 937

BOWMAN, MALCOLM C., see DONALD E. WEIDHAAS..(Feb.) 175

BRADY, U. E., JR., and B. W. ARTHUR—Metabolism of *O,O*-dimethyl *O*-[4-(methylthio)-*m*-tolyl] Phosphorothioate by White Rats.....(Dec.) 1232

BRADY, U. E., JR., see H. W. DOROUGH.....(Feb.) 25, 97

BRAGASSA, C. B., and J. R. BRAZZEL—Inheritance of Resistance to Endrin in the Boll Weevil.....(Apr.) 311

BRASS, C. L., see G. S. KALKAT.....(Dec.) 1186

BRAY, D. F.—European Corn Borer Control in Potatoes.....(Aug.) 782

BRAY, D. F., see J. G. TOUHEY.....(Apr.) 293

BRAZZEL, J. R., T. B. DAVICH, and L. D. HARRIS—A New Approach to Boll Weevil Control.....(Aug.) 723
BRAZZEL, J. R., HOWARD CHAMBERS, and P. J. HAMMAN—A Laboratory Rearing Method and Dosage-Mortality Data on the Bollworm, *Heliothis zea*.....(Oct.) 949
BRAZZEL, J. R., see D. A. LINDQUIST.....(Apr.) 299
BRAZZEL, J. R., see C. B. BRAGASSA.....(Apr.) 311
BRAZZEL, J. R., see JOHN G. THOMAS.....(June) 417
BRAZZEL, J. R., see M. S. MAYER.....(Dec.) 1197
BRETHOUR, J. R., see T. L. HARVEY.....(Sci. Note, Aug.) 814
BRETT, CHARLES, H., C. L. MCCOMBS, and D. M. DAUGHERTY—Resistance of Squash Varieties to the Pickleworm and the Value of Resistance to Insecticidal Control.....(Dec.) 1191
BRIERLEY, PHILIP, see FLOYD F. SMITH.....(June) 506
BRIGGS, C. P., III, see J. P. HOLLINGSWORTH.....(Sci. Note, Feb.) 210
BRIGGS, C. P., III, see JOE P. HOLLINGSWORTH.....(Apr.) 305
BRINDLEY, T. A., see C. E. MCCOY.....(Aug.) 713
BROWN, A. W. A., and A. G. CARMICHAEL—Lysine and Alanine as Mosquito Attractants.....(Apr.) 317
BROWN, A. W. A., A. S. WEST, and A. S. LOCKLEY—Chemical Attractants for the Adult House Fly.....(Aug.) 670
BROWN, A. W. A., see F. MATSUMURA.....(Dec.) 1176
BROWN, LAMAR C., CHARLES LINCOLN, R. E. FRANS, and B. A. WADDLE—Some Effects of Toxaphene-DDT and Calcium Arsenate on Growth and Development of Cotton.....(Apr.) 309
BRUEHL, G. W., see ROBERT F. HARWOOD.....(Oct.) 883
BRUBAKER, ROSS W., see ORIN A. HILLS.....(Oct.) 970
BRUNDRETT, H. M., see J. WEINTRAUB.....(Feb.) 84
BURNS, EDWARD C., B. H. WILSON, and B. A. TOWER—Effect of Feeding *Bacillus thuringiensis* to Caged Layers for Fly Control.....(Oct.) 913
BURTON, VERNON E., see EDWARD S. SYLVESTER.....(Aug.) 758
BUSBEY, RUTH L.—Pesticide Names Found in U.S.S.R. Technical Literature.....(Apr.) 254
BUTCHER, J. W., and R. B. CARLSON—Dosage Levels and Seasonal Behavior of Insecticides Used in Control of European Pine Shoot Moth.....(Oct.) 987
BUTCHER, JAMES W., see CHARLES F. GIBBONS.....(Aug.) 681
BUTLER, GEORGE D., JR., see DONALD M. TUTTLE.....(Oct.) 836
BUTT, B. A., and J. C. KELLER—Susceptibility of Boll Weevils to Some Phosphorodithioic Acid Esters.....(Sci. Note, Aug.) 813
BUTT, B. A., and J. C. KELLER—The Toxicity of Some Phosphorothioic Acid Esters to the Two-Spotted Spider Mite.....(Sci. Note, Dec.) 1259
BUTT, B. A., see J. C. KELLER.....(Sci. Note, Dec.) 1262
BUTTRAM, J. R., and B. W. ARTHUR—Absorption and Metabolism of Bayer 22408 by Dairy Cows and Residues in the Milk.....(June) 446
BUTTRAM, J. R., and B. W. ARTHUR—Magnitude and Nature of Residues in Tissues and Eggs of Poultry Receiving Ruelene in the Feed.....(June) 456
BUTTRAM, J. R., see J. A. TIMMERMAN, JR.....(June) 441
BUTZ, ANDREW, see HUBERT B. CLARK.....(Oct.) 1022

CALL, F., see E. J. BOND.....(Sci. Note, Aug.) 808
CAMPBELL, J. MILTON, see J. G. RODRIGUEZ.....(Oct.) 984
CAMPBELL, W. V., T. G. BOWERY, and K. G. JESTER—Seasonal History and Control of the Alfalfa Weevil in North Carolina.....(Aug.) 743
CARLSON, ELMER C.—Lygus Bug Damage to Table Beet Seed Plants.....(Feb.) 117
CARLSON, R. B., see J. W. BUTCHER.....(Oct.) 987
CARMAN, GLENN E., see JOSEPH L. PAPPAS.....(Feb.) 152
CARMICHAEL, A. G., see A. W. A. BROWN.....(Apr.) 317
CASIDA, JOHN E., see ABDULLA F. AL-AZAWI.....(Feb.) 127
CASIDA, J. E., see H. R. KRUEGER.....(Apr.) 239
CHAMBERLAIN, W. F., P. E. GATTERDAM, and D. E. HOPKINS—The Metabolism of P^{32}-Labeled Dimethoate in Sheep.....(Aug.) 733
CHAMBERLAIN, W. F., see M. J. WRICH.....(Sci. Note, Oct.) 1049
CHAMBERS, HOWARD, see J. R. BRAZZEL.....(Oct.) 949
CHAPMAN, A. J., O. T. ROBERTSON, and L. W. NOBLE—Evaluation of Stalk Shredders and Cutters for Pink Bollworm Control.....(Aug.) 791
CHAPMAN, A. J., see R. L. MCGARR.....(Oct.) 972
CHAPMAN, P. J., see E. H. GLASS.....(Oct.) 915
CHARPENTIER, LEON J.—Effectiveness of Insecticides Against the Ruty Plum Aphid and Ants.....(Sci. Note, Feb.) 204
CHENG, TIEN-HSI, DONALD E. H. FREAR, and HENRY F. ENOS, JR.—Fly Control in Dairy Barns Sprayed with Dimethoate and the Determination of Dimethoate Residues in Milk.....(Aug.) 740
CHENG, TIEN-HSI, and EARL M. KESLER—A Three-Year Study on the Effect of Fly Control on Milk Production by Selected and Randomized Dairy Herds.....(Aug.) 751
CHIANG, H. C., and ROY D. WILCOXSON—Interactions of the European Corn Borer and Stalk Rot in Corn.....(Oct.) 850
CHOCK, Q. C., C. J. DAVIS, and M. CHONG—*Sepedon macropus* (Diptera: Sciomyzidae) Introduced into Hawaii as a Control for the Liver Fluke Snail, *Lymnaea ollula*.....(Feb.) 1
CHONG, M., see Q. C. CHOCK.....(Feb.) 1
CHRISTENSEN, C. M., see C. P. MISRA.....(Oct.) 1032
CHRISTENSON, L. D., see L. F. STEINER.....(Feb.) 30
CLABORN, H. V., see, M. C. IVEY.....(June) 487
CLABORN, H. V., see R. H. ROBERTS.....(Sci. Note, Oct.) 1053
CLARK, EDGAR W., CLYDE A. RICHMOND, and JAMES M. MCGOUGH—Artificial Media and Rearing Techniques for the Pink Bollworm.....(Feb.) 4
CLARK, EDGAR W., and PERRY A. GLICK—Some Predators and Scavengers Feeding upon Pink Bollworm Moths.....(Sci. Note, Aug.) 815
CLARK, EDGAR W., and CLYDE A. RICHMOND—The Effect of Centrifugal Force on Pink Bollworm Larvae.....(Sci. Note, Dec.) 1262
CLARK, EDGAR W., see CLYDE A. RICHMOND.....(Aug.) 789
CLARK, EDGAR W., see CHING H. TSAO.....(Dec.) 1228
CLARK, HUBERT B., and ANDREW BUTZ—The Effect of Some Insecticides on the Metabolites of *Blattella germanica*.....(Oct.) 1022
CLARK, J. C., see JOSEPH HACSKAYLO.....(June) 411
CLARK, J. C., see D. A. LINDQUIST.....(Dec.) 1132
CLARK, P. H., see M. M. COLE.....(Aug.) 649
COHEN, CHARLES F., see NORMAN MITLIN.....(Aug.) 651
COLE, M. M., and P. H. CLARK—Development of Resistance to Synergized Pyrethrins in Body Lice and Cross Resistance to DDT.....(Aug.) 649
Coles, L. W., see BENJAMIN PUTTLER.....(Oct.) 878
COMPLIN, J. O., see L. R. JEPISON.....(Feb.) 55
CONCIENNE, E. J., see S. D. HENSLEY.....(Feb.) 146
CONCIENNE, E. J., see S. D. HENSLEY.....(Dec.) 1153
CONCIENNE, E. J., see W. H. LONG.....(Dec.) 1155
CONNELL, W. A., see J. A. BAKER.....(Oct.) 1024
CONNELL, W. A., see DONALD MACCREARY.....(Sci. Note, Oct.) 1062
CONNIN, R. V., see F. E. SKOOG.....(Feb.) 170
CONNOLA, D. P., and R. C. SWEET—Aerial Spray Tests against Gypsy Moth, *Porthetria dispar*, in New York.....(Apr.) 315
COOK, PAUL P., and EDWARD S. SYLVESTER—Influence of Caging and Transferring Techniques on Aphid Mortality and Virus Transmission.....(Feb.) 101
COPPEL, HARRY C., and DALE M. NORRIS, JR.—Systemic Insecticidal Action of Certain Phosphates in *Pinus strobus* against *Diprion similis*.....(Sci. Note, Oct.) 1061
COPPEL, HARRY C., see DALE M. NORRIS, JR.....(Feb.) 159
COUDRIET, DONALD L., see ORIN A. HILLS.....(Oct.) 970
COWAN, C. B., JR., C. R. PARENCIA, JR., and J. W. DAVIS—Control of Several Cotton Insects in Field Experiments in 1960.....(Oct.) 1011
COWAN, C. B., JR., see J. W. DAVIS.....(Oct.) 966
COWAN, F. T., see F. E. SKOOG.....(Feb.) 170
COX, EDWIN L., see EDWARD S. SYLVESTER.....(Dec.) 1080
COX, JAMES A.—Evaluation of Insecticides for the Control of the Grape Berry Moth, *Paralobesia viteana*.....(Oct.) 853
CRAMER, HARRY W., see MIR S. MULLA.....(Oct.) 865
CREIGHTON, C. S., W. S. KINARD, and NORMAN ALLEN—Effectiveness of *Bacillus thuringiensis* and Several Chemical Insecticides for Control of Budworms and

Hornworms on Tobacco.....(Dec.) 1112
CUTKOMP, L. K., see N. G. PATEL.....(Aug.) 773
CUTKOMP, L. K., see M. GOVINDAN.....(Dec.) 1121

DAHM, P. A., J. GURLAND, I. LEE, and J. BERLIN—A Comparison of Some House Fly Bioassay Methods.....(Apr.) 343
DAHM, P. A., see R. E. JOHNSEN.....(Sci. Note, Apr.) 398
DANIELS, NORRIS E.—Greenbug Control with Di-Syston Used as a Soil Treatment.....(Sci. Note, June) 606
DARROW, DARRELL I., see FREDERICK W. PLAPP, JR.....(Apr.) 389
DAUGHERTY, D. M., see CHARLES H. BRETT.....(Dec.) 1191
DAVICH, T. B., see D. A. LINDQUIST.....(Apr.) 299, 379
DAVICH, T. B., see J. R. BRAZZEL.....(Aug.) 723
DAVICH, T. B., see ERMA S. VANDERZANT.....(Oct.) 923
DAVICH, T. B., see D. A. LINDQUIST.....(Dec.) 1132
DAVICH, T. B., see JOSEPH HACSKAYLO.....(Dec.) 1206
DAVIDSON, R. H., see G. S. KALKAT.....(Dec.) 1186
DAVIS, A. C., F. L. MCEWEN, and W. T. SCHROEDER—Control of Pea Enation Mosaic in Peas with Insecticides.....(Feb.) 161
DAVIS, C. J., see Q. C. CHOCK.....(Feb.) 1
DAVIS, CLARENCE S., see A. E. MICHELBACHER.....(June) 559
DAVIS, J. W., C. R. PARENCIA, JR., and C. B. COWAN, JR.—Field Experiments for Control of Thrips, Cotton Fleahoppers, and Overwintered Boll Weevils in 1960.....(Oct.) 966
DAVIS, J. W., see C. B. COWAN, JR.....(Oct.) 1011
DAWSEY, L. H., D. W. WOODHAM, and C. S. LOFGREN—Heptachlor and Heptachlor Epoxide Residues in Truck Crops.....(Sci. Note, Dec.) 1264
DEAN, H. A., E. L. WILSON, J. C. BAILEY, and L. A. RIEHL—Fluorescent Dye Technique for Studying Distribution of Spray Oil Deposit on Citrus.....(Apr.) 333
DEAN, H. A., MICHAEL F. SCHUSTER, and JACK C. BAILEY—The Introduction and Establishment of *Dusmetia sangwani* on *Antonina graminis* in South Texas.....(Oct.) 952
DEAN, H. A., and JACK C. BAILEY—A Flatid Planthopper, *Metcalfa pruinosa*.....(Dec.) 1104
DEAN, R. W.—Recent Developments in the Insecticidal Control of the Apple Maggot.....(June) 467
DEBACH, PAUL, see ERNEST B. WHITE.....(Sci. Note, Aug.) 806
DECKER, G. C., see STEVE MOORE, III.....(June) 479
DEFOLIART, G. R., and DONALD N. WILLETT—Methoxychlor in Milk of Dairy Cows Dusted with the Wettable Powder.....(Oct.) 871
DEFOLIART, G. R., and J. L. ESCHLE—Barn Fogging as a Fly Control Method.....(Oct.) 862
DELONG, DWIGHT M., see WALTER L. JONES.....(Sci. Note, Aug.) 813
DELONG, DWIGHT M., see ROBERT E. WILLIAMS.....(Sci. Note, Dec.) 1265
DENNIS, NORMAN M.—The Effects of Gamma-Ray Irradiation on Certain Species of Stored-Product Insects.....(Sci. Note, Feb.) 211
DEPEW, LESTER J.—Field Tests with Insecticides to Control Spotted Alfalfa Aphid in Southwestern Kansas, 1955–1960.....(Dec.) 1144
DEWEY, J. E., see H. E. ALLER.....(June) 508
DICKASON, E. A., and J. D. LATTIN—Control of the Vetch Bruchid, *Bruchus brachialis*, in Oregon.....(Apr.) 219
DICKASON, E. A., and L. C. TERRIERE—Insecticide Residues on Red Clover After Clover Root Borer Control with Aldrin and Heptachlor Granules.....(Sci. Note, Oct.) 1058
DICKASON, E. A., see CHARLES M. LEACH.....(June) 543
DIETRICK, E. J.—An Improved Backpack Motor Fan for Suction Sampling of Insect Populations.....(Sci. Note, Apr.) 394
DITMAN, L. P., see ROGER H. RATCLIFFE.....(Apr.) 356
DITMAN, L. P., see P. H. SCHWARTZ, JR.....(Aug.) 663
DITMAN, L. P., see R. N. HOFMASTER.....(Oct.) 921
DOBSON, R. C., and D. A. HUBER—Control of Face Flies (*Musca autumnalis*) on Beef Cattle in Indiana.....(June) 434
DOGGER, JAMES R., see William T. SPINK.....(June) 423
DOROUGH, H. W., U. E. BRADY, JR., J. A. TIMMERMAN, JR., and B. W. ARTHUR—Residues in Tissues and Eggs of Poultry Dusted with Co-Ral (Bayer 21/199).....(Feb.) 25
DOROUGH, H. W., U. E. BRADY, JR., J. A. TIMMERMAN, and B. W. ARTHUR—Residues in Tissues and Eggs of Poultry Receiving Co-Ral (Bayer 21/199) in the Feed.....(Feb.) 97
DOROUGH, H. W., and B. W. ARTHUR—Systemic and Contact Insecticidal Effectiveness of Selected Chemicals Administered Orally or Dermally to Rabbits.....(Oct.) 993
DOROUGH, H. W., and B. W. ARTHUR—Toxicity of Several Organophosphates Administered in the Diet of Broilers to House Fly Larvae in the Feces.....(Dec.) 1117
DOROUGH, H. W., and B. W. ARTHUR—Distribution and Solubility Properties of Phosphoric and *O,O*-Diethyl Phosphorodithioic Acids Fed to Laying Hens.....(Dec.) 1140
DOROUGH, H. W., see J. A. TIMMERMAN, JR.....(June) 441
DOUCETTE, CHARLES F.—Systemic Insecticides for Control of Aphids on Field-Grown Easter Lily.....(June) 595
DOWLING, M. A. C., see R. TRAUB.....(Aug.) 654
DOWDEN, PHILIP B.—Endemic Populations of the Spruce Budworm in the Adirondacks.....(Sci. Note, Aug.) 811
DOWDEN, PHILIP B.—The Persistence of Gypsy Moth Parasites in Heavily Sprayed Areas on Cape Cod, Massachusetts.....(Oct.) 873
DOWDEN, PHILIP B.—The Gypsy Moth Egg Parasite, *Ooencyrtus kuwanai*, in Southern Connecticut in 1960.....(Oct.) 876
DREW, W. A., see RICHARD G. PRICE.....(Sci. Note, Aug.) 819
DROOZ, A. T., and J. D. SOLOMON—Elm Spanworm Egg Mass Studies.....(Sci. Note, Oct.) 1060
DRUMMOND, R. O.—Tests with Sprays of General Chemical 4072 for Systemic Control of Cattle Grubs.....(Sci. Note, Oct.) 1047
DRUMMOND, R. O.—Tests with General Chemical 3582 and 4072 for the Control of Ticks Affecting Livestock.....(Sci. Note, Oct.) 1050
DRUMMOND, R. O., see R. A. HOFFMAN.....(Sci. Note, Oct.) 1052
DUFFIELD, JOHN W., see NORMAN E. JOHNSON.....(Sci. Note, Dec.) 1258
DUSTAN, G. G., and A. B. STEVENSON—Pear Leaf Scorch and Its Relation to the European Red Mite.....(Oct.) 918
DUTKY, S. R., see W. N. SULLIVAN.....(Aug.) 661
DUTKY, S. R., see T. MCINTYRE.....(Sci. Note, Aug.) 809

EARLE, N. W., see EDWARD N. LAMBREMONT.....(Oct.) 964
EDDY, GAINES W.—Laboratory Tests of Residues of Organophosphorus Compounds against House Flies.....(Apr.) 386
EDDY, GAINES W., and A. R. ROTH—Toxicity to Fly Larvae of the Feces of Insecticide-Fed Cattle.....(June) 408
EDDY, GAINES W., see A. R. ROTH.....(Sci. Note, Feb.) 203
EDDY, GAINES W., see FREDERICK W. PLAPP, JR..(Apr.) 389
EDDY, GAINES W., see LEYBURN F. LEWIS.....(Apr.) 392
EGUISA, F., see R. H. RHODE.....(Sci. Note, Feb.) 202
ELDEFRAWI, M. E., and W. M. HOSKINS—Relation of the Rate of Penetration and Metabolism to the Toxicity of Sevin to Three Insect Species.....(June) 401
ELMORE, JOHN C.—Control of the Cabbage Looper with a Nuclear Polyhedrosis Virus Disease.....(Feb.) 47
ENOS, HENRY F., JR., see TIEN-HSI CHENG.....(Aug.) 740
ERRATA.....627, 1143
ERWIN, D. C., H. T. REYNOLDS, and M. J. GARBER—Predisposition to Pythium Seedling Disease and an Activated Charcoal-Fungicide Interaction as Factors Influencing Emergence of Cotton Seed Treated with Phorate.....(Oct.) 855
ESCHLE, J. L., see G. R. DEFOLIART.....(Oct.) 862
ESENTHER, G. R., see T. C. ALLEN.....(Sci. Note, Oct.) 1055

FAIRCHILD, M. L., see R. E. JOHNSEN..(Sci. Note, Apr.) 398
FALCON, LOUIS A., see HAROLD F. MADSEN.....(Oct.) 892
FALES, J. H., J. C. KELLER and O. F. BODENSTEIN—Experiments on Control of the Face Fly.....(Dec.) 1147
FARRIER, M. H., and WILLIAM W. REID—Indices of Seasonal Populations of the Adults, Eggs, and Larvae of the Corn Earworm.....(Aug.) 692
FERRY, G. V., see EDWARD S. SYLVESTER.....(Aug.) 758
FEWKES, D. W.—Stool Size as a Factor in the Sampling

of Sugarcane Froghopper Nymph Populations...(Aug.) 771
FEZER, K. D., see C. S. KOEHLER.....(Aug.) 631
FIELD, GORDON—A Possible Explanation of the Chemical Control of Simuliid Larvae.....(Sci. Note, June) 607
FIFE, L. C.—Factors Influencing Pink Bollworm Pupation and Moth Emergence from Overwintering Larvae in Central Texas.....(Oct.) 908
FINFROCK, D. C., see A. A. GRIGARICK.....(Feb.) 36
FINLEY, LUCILLE, see LORRAINE PHILLIPS.....(Dec.) 1131
FISHER, T. W.—Biology of *Physcus* sp. (Eulophidae Aphelininae) from Burma.....(June) 444
FISHER, T. W., E. I. SCHLINGER, and R. VAN DEN BOSCH—Biological Notes on Five Recently Imported Parasites of the Egyptian Alfalfa Weevil, *Hypera brunneipennis*.....(Sci. Note, Feb.) 196
FLANDERS, S. E.—Production Uniformity in the Commercial Culture of Entomophagous Insects.....(Sci. Note, June) 611
FLOYD, E. H.—Effectiveness of Malathion Dust as a Protectant for Farm-Stored Corn in Louisiana.....(Oct.) 900
FORSYTHE, H. Y., JR., C. S. KOEHLER, and GEORGE G. GYRISCO—Long-term Effectiveness of Soil Insecticides on the Alfalfa Snout Beetle Larva....(Sci. Note, June) 601
FORSYTHE, H. Y., JR., and GEORGE G. GYRISCO—Determining the Appropriate Transformation of Data from Insect Control Experiments for Use in the Analysis of Variance.....(Oct.) 859
FOX, IRVING, and ILEANA GARCIA-MOLL—Ants Attacking Fleas in Puerto Rico.....(Sci. Note, Oct.) 1065
FRANCE, HENRY L., ROBERT E. TREECE, and GEORGE W. WARE—Chemical and Biological Assays of Lindane Residues on Alfalfa.....(Aug.) 642
FRANS, R. E., see LAMAR C. BROWN.....(Apr.) 309
FREAR, DONALD E. H., see TIEN-HSI CHENG.....(Aug.) 740
FREEMAN, A. E., see R. E. JOHNSEN....(Sci. Note, Apr.) 398
FRENCH, FRANK E., see EARLE S. RAUN.....(June) 428
FRICK, KENNETH E.—Control of Insects and Mites Attacking Mint in Central Washington.....(Aug.) 644
FUKUTO, T. R., R. L. METCALF, and M. Y. WINTON—The Insecticidal Properties of Esters of Phosphonic and Phosphinic Acids.....(Oct.) 955
FUKUTO, T. R., see E. L. ATKINS, JR.....(June) 455
FULTON, R. A., see A. H. YEOMANS.....(Sci. Note, Feb.) 199
FULTON, R. A., see A. H. YEOMANS.....(Sci. Note, Apr.) 399
FULTON, R. A., see W. N. SULLIVAN.....(Aug.) 661
FULTON, R. A., see GARY D. KNIPLING..(Sci. Note, Oct.) 1054
FULTON, R. A., see W. N. SULLIVAN....(Sci. Note, Oct.) 1059
FYE, R. E., A. R. HOPKINS and R. L. WALKER—Field Experiments on Control of Overwintered Boll Weevils.....(Aug.) 622

GAHAN, J. G., G. C. LABRECQUE, and H. G. WILSON—Hercules AC-5727 as a Residual Spray for Adult Mosquitoes.....(Feb.) 63
GARBER, M. J., see D. C. ERWIN.....(Oct.) 855
GARCIA-MOLL, ILEANA, see IRVING FOX..(Sci. Note, Oct.) 1065
GAST, R. T.—Some Shortcuts in Laboratory Rearing of Boll Weevils.....(Sci. Note, Apr.) 395
GAST, R. T.—Factors Involved in Differential Susceptibility of Corn Earworm Larvae to DDT.....(Dec.) 1203
GATTERDAM, P. E., see W. F. CHAMBERLAIN.....(Aug.) 733
GEORGHIOU, G. P., R. L. METCALF, and R. B. MARCH—The Development and Characterization of Resistance to Carbamate Insecticides in the House Fly, *Musca domestica*.....(Feb.) 132
GEORGHIOU, G. P., and R. L. METCALF—Synergism of Carbamate Insecticides with Octachlorodipropyl Ether.....(Feb.) 150
GEORGHIOU, G. P., and R. L. METCALF—The Absorption and Metabolism of 3-Isopropylphenyl N-Methylcarbamate by Susceptible and Carbamate-Selected Strains of House Fly.....(Apr.) 231
GEORGHIOU, G. P., and M. S. MULLA—A Method and Results of Screening Insecticides against Adult *Hippelates* Eye Gnats.....(Apr.) 264
GEORGHIOU, G. P., and M. S. MULLA—Resistance to Chlorinated Hydrocarbon Insecticides in the Eye Gnat, *Hippelates collusor*.....(Aug.) 695
GEORGHIOU, GEORGE P., see MIR S. MULLA.....(Oct.) 865
GERHARDT, PAUL D., and DON L. TURLEY—Control of Certain Potato Insects in Arizona with Soil Applications of Granulated Phorate.....(Dec.) 1217
GERSDORFF, W. A., P. G. PIQUETT, NORMAN MITLIN, and NATHAN GREEN—Reproducibility of the Toxicity Ratio of Allethrin to Pyrethrins Applied to House Flies by the Turntable Method.....(June) 580
GERSDORFF, W. A., P. G. PIQUETT, and NORMAN MITLIN—Stability of Allethrin and Kerosene Solutions of It in Storage as Demonstrated by Bioassay.....(Aug.) 731
GERSDORFF, W. A., and P. G. PIQUETT—The Relative Effectiveness of Two Synthetic Pyrethroids More Toxic to House Flies than Pyrethrins in Kerosene Sprays.....(Dec.) 1250
GIBBONS, CHARLES F., and JAMES W. BUTCHER—The Oak Skeletonizer, *Bucculatrix ainsliella*, in a Michigan Woodlot.....(Aug.) 681
GIFFORD, JAMES R., R. R. WALTON, and K. D. ARBUTHNOT—Sorghum as a Host of the Southwestern Corn Borer.....(Feb.) 16
GLASS, E. H., P. J. CHAPMAN, and R. M. SMOCK—Fate of Apple Maggot and Plum Curculio Larvae in Apple Fruits Held in Controlled Atmosphere Storage...(Oct.) 915
GLICK, PERRY A., and HARRY M. GRAHAM—Early-Season Collections of Three Cotton Insects by Argon-Glow Lamp and Black-Light Traps.....(Sci. Note, Dec.) 1253
GLICK, PERRY A., see JOE P. HOLLINGSWORTH.....(Apr.) 305
GLICK, PERRY A., see HARRY M. GRAHAM.....(Aug.) 788
GLICK, PERRY A., see EDGAR W. CLARK.....(Sci. Note, Aug.) 815
GOODE, J. P., and N. M. RANDOLPH—Biology and Control of the Sugarcane Rootstock Weevil on Grain Sorghum in Texas.....(Apr.) 301
GORDON, H. T., see WALTER HOY.....(Sci. Note, Feb.) 198
GORZ, H. J., see G. R. MANGLITZ.....(Dec.) 1156
GOULD, GEORGE E.—Effectiveness of DDT for Cabbage Caterpillar Control in Indiana, 1945 to 1960....(June) 475
GOVINDAN, M., and L. K. CUTKOMP—Carbon Disulfide Effectiveness on Flour Beetles in Relation to Temperature and Exposure Time.....(Dec.) 1121
GRAHAM, HARRY M., PERRY A. GLICK and JOE P. HOLLINGSWORTH—Effective Range of Argon Glow Lamp Survey Traps for Pink Bollworm Adults.....(Aug.) 788
GRAHAM, H. M., O. T. ROBERTSON, P. L. ADKISSON, and L. H. WILKES—Further Tests of the Effectiveness of Cotton Stalk Shredders for Controlling the Pink Bollworm.....(Sci. Note, Oct.) 1057
GRAHAM, HARRY M. see JOE P. HOLLINGSWORTH..(Apr.) 305
GRAHAM, HARRY M., see PERRY A. GLICK.....(Sci. Note, Dec.) 1253
GRAHAM, O. H.—The Primary Evaluation of Three Organophosphorus Compounds for Possible Use in the Control of Livestock Insects.....(Sci. Note, Oct.) 1046
GRANETT, PHILIP, and ELTON J. HANSENS—Tests against Face Flies on Cattle in New Jersey During 1960.....(June) 562
GRAYSON, J. M., see G. C. ROCK.....(Feb.) 88
GRAYSON, J. M., see B. D. PERKINS, JR.....(Aug.) 747
GREEN, NATHAN, see W. A. GERSDORFF.....(June) 580
GRIGARICK, A. A., W. H. LANGE, and D. C. FINFROCK—Control of the Tadpole Shrimp, *Triops longicaudatus*, in California Rice Fields.....(Feb.) 36
GROSS, A. E., see CHARLES M. LEACH.....(June) 543
GUNTHER, F. A., see E. L. ATKINS, JR.....(June) 455
GURLAND, J., see P. A. DAHM.....(Apr.) 343
GUTHRIE, F. E., see F. R. LAWSON.....(Feb.) 93
GUTHRIE, W. D., and G. H. STRINGFIELD—The Recovery of Genes Controlling Corn Borer Resistance in a Backcrossing Program.....(Apr.) 267
GUTHRIE, W. D., and G. H. STRINGFIELD—Use of Test Crosses in Breeding Corn for Resistance to European Corn Borer.....(Aug.) 784
GUTHRIE, W. D., and E. V. WALTER—Corn Earworm and European Corn Borer Resistance in Sweet Corn Inbred Lines.....(Dec.) 1248

GYRISCO, GEORGE G., and E. W. HUDDLESTON—The Persistence of Aldrin, Dieldrin, and Endrin Residues on Fresh Forage and on Hay Under Various Conditions of Curing.....(Aug.) 718
GYRISCO, GEORGE G., see E. W. HUDDLESTON.....(Sci. Note, Feb.) 209
GYRISCO, GEORGE G., see R. L. RIDGWAY.....(Apr.) 244
GYRISCO, GEORGE G., see H. Y. FORSYTHE, JR.....(Sci. Note, June) 601
GYRISCO, GEORGE G., see C. S. KOEHLER.....(Aug.) 625, 631
GYRISCO, GEORGE G., see H. Y. FORSYTHE.....(Oct.) 859

HACSKAYLO, JOSEPH, and C. D. RANNEY—Emergence of Phorate-Treated Cotton Seed As Affected by Substrate Moisture and Temperature.....(Apr.) 296
HACSKAYLO, JOSEPH, D. A. LINDQUIST and J. C. CLARK—Phorate Accumulation by Cotton Plants and Recovery From Soil.....(June) 411
HACSKAYLO, JOSEPH, D. A. LINDQUIST, and T. B. DAVICH—Dimethoate Absorption and Its Translocation and Distribution in the Cotton Plant.....(Dec.) 1206
HACSKAYLO, JOSEPH, see D. A. LINDQUIST.....(Apr.) 379
HACSKAYLO, JOSEPH, see D. A. LINDQUIST.....(Dec.) 1132
HAEUSSLER, G. J., and HARRY L. PARKER—Herbert Dwight Smith, (1894–1959).....(Obituary, Feb.) 217
HAGEL, G. T., see RALPH SCHOPP.....(Oct.) 1003
HAGEN, ARTHUR F.—Evaluation of Thiodan and Sevin for Control of Webworms in Sugar Beets.....(Sci. Note, Aug.) 799
HALE, R. L., see I. M. HALL.....(Feb.) 141
HALL, I. M., R. L. HALE, H. H. SHOREY, and K. Y. ARAKAWA—Evaluation of Chemical and Microbial Materials for Control of the Cabbage Looper.....(Feb.) 141
HAMMAN, P. J., see J. R. BRAZZEL.....(Oct.) 949
HANSENS, ELTON J., see PHILIP GRANETT.....(June) 562
HARDING, JAMES A.—Studies on the Control of Thrips Attacking Onions.....(Sci. Note, Dec.) 1254
HARPER, A. M.—Effect of Insecticides on the Sugar-Beet Root Aphid, *Pemphigus betae*.....(Dec.) 1151
HARPER, A. M., C. E. LILLY, and P. BERGEN—Effect of Insecticides on Emergence of Sugar-Beet Seedlings and on Control of the Sugar-Beet Root Maggot.....(Oct.) 895
HARDING, JAMES A.—Effect of Migration, Temperature, and Precipitation on Thrips Infestations in South Texas.....(Feb.) 77
HARDING, JAMES A.—Evaluation of Insecticides for Control of the Tobacco Thrips on Peanuts.....(Sci. Note, Feb.) 200
HARDING, JAMES A.—Melon Aphid Control on Cantaloupes.....(Sci. Note, June) 598
HAREIN, PHILLIP K., and GARY F. KRAUSE—Differential Sorption of Fumigant Formulations by Wheat and Relative Toxicity to Adult Rice Weevil, *Sitophilus sasakii*.....(Apr.) 261
HARRIES, F. H.—Effect of Certain Antibiotics and Other Compounds on the Two-Spotted Spider Mite.....(Feb.) 122
HARRIES, F. H.—Effects of Mixtures of Cube with Various Drugs on the Mexican Bean Beetle.....(Sci. Note, June) 599
HARRIES, F. H.—Laboratory Tests of Insecticides against the Salt-Marsh Caterpillar.....(Sci. Note, Dec.) 1266
HARRIES, FORD H., see STANLEY HOYT.....(Feb.) 12
HARRIS, C. R., and E. P. LICHTENSTEIN—Factors Affecting the Volatilization of Insecticidal Residues from Soils.....(Oct.) 1038
HARRIS, EMMETT D., JR.—DDT Spray Formulations and Dosages for Control of Corn Stem Weevil, *Hyperodes humilis*, and Fall Armyworm, *Laphygma frugiperda*, Control on Sweet Corn.....(June) 546
HARRIS, L. D., see J. R. BRAZZEL.....(Aug.) 723
HARRIS, L. E., see J. V. SMITH.....(Dec.) 1091
HARRIS, ROBERT L., STANLEY WEARDEN, and CLIFFORD C. ROAN—Preliminary Study of the Genetics of the House Fly, *Musca domestica*.....(Feb.) 40
HARSHBARGER, J. C., and E. M. RAFFENSPERGER—An Evaluation of Coding Systems for Estimating Populations of the Shaft Louse, *Menopon gallinae*.....(Feb.) 74
HARVEY, T. L., and J. R. BRETHOUR—Effectiveness of Ruelene and Ronnel for Ear Tick Compared with Cattle Grub Control.....(Sci. Note, Aug.) 814
HARWOOD, ROBERT F., and G. W. BRUEHL—Seed Systemics for Control of Aphids on Oats and Barley.....(Oct.) 883
HAY, C. JOHN, and WILLARD C. MYSER—Use of P^{32} As An Aid in Biological Studies of the Leafhopper, *Scaphoideus luteolus*.....(Sci. Note, Dec.) 1260
HAYNES, DEAN L., see WILLIAM E. MILLER.....(Oct.) 1014
HENNEBERRY, THOMAS J., EDGAR A. TAYLOR, FLOYD F. SMITH, A. L. BOSWELL, and W. D. MCCLELLAN—Control of Spider Mites and Black Spot on Roses with Acaricide-Fungicide Sprays and Dusts.....(Feb.) 61
HENNEBERRY, T. J., E. A. TAYLOR, and A. L. BOSWELL—The Effect of Tedion on the Eggs and Larvae of Three Strains of the Two-Spotted Spider Mite, *Tetranychus telarius*.....(Feb.) 168
HENNEBERRY, T. J., and E. A. TAYLOR—Control of Millipedes in Greenhouse Soil.....(Sci. Note, Feb.) 197
HENNEBERRY, T. J., E. A. TAYLOR, and F. F. SMITH—Foliage and Soil Treatments for the Control of Flower Thrips in Outdoor Roses.....(Apr.) 233
HENNEBERRY, T. J., E. A. TAYLOR, F. F. SMITH, A. L. BOSWELL, and R. V. TRAVIS—Combination Acaricide-Insecticide-Fungicide Sprays on Outdoor Roses.....(June) 420
HENNEBERRY, T. J., E. A. TAYLOR, and JOHN G. PALMER—The Effect of Acaricide-Fungicide Combination Sprays on Two-Spotted Spider Mite Populations, Blackspot Control, and Winter Injury to Roses.....(Aug.) 659
HENNEBERRY, T. J., and E. A. TAYLOR—The Effect of Clean Culture and Early Spring Acaricide Treatments on Overwintering Spider Mite Populations in Outdoor Rose Plots.....(Sci. Note, Dec.) 1255
HENSLEY, S. D., W. H. LONG, L. R. RODDY, W. J. MCCORMICK, and E. J. CONCIENNE—Effects of Insecticides on the Predaceous Arthropod Fauna of Louisiana Sugarcane Fields.....(Feb.) 146
HENSLEY, S. D., W. J. MCCORMICK, W. H. LONG, and E. J. CONCIENNE—Field Tests with New Insecticides for Control of the Sugarcane Borer in Louisiana in 1959.....(Dec.) 1153
HENSLEY, S. D., see W. H. LONG.....(Dec.) 1155
HIBBS, E. T., see MYRON A. ANDERSON.....(Oct.) 827
HILL, C. H., see G. C. ROCK.....(Feb.) 88
HILLS, ORIN A., DONALD L. COUDRIET, ROSS W. BRUBAKER, and PAUL D. KEENER—Effect of Curly Top and Cucumber Mosaic Viruses on Cantaloups.....(Oct.) 970
HINCKLEY, ALDEN D.—Parasitization of *Cactoblastis cactorum* by *Trichogramma semifumatum* in Hawaii.....(Sci. Note, Feb.) 207
HITCHCOCK, STEPHEN W.—Egg Parasitism and Larval Habits of the Orange-Striped Oakworm.....(June) 502
HITCHCOCK, STEPHEN W.—Pupal Mortality of the Orange-Striped Oakworm.....(Oct.) 962
HODSON, ALEXANDER C., see HERBERT M. KULMAN.....(Apr.) 221
HODSON, A. C., see C. P. MISRA.....(Oct.) 1032
HODSON, ALEXANDER C., see HERBERT M. KULMAN.....(Dec.) 1138, 1221
HOFFMAN, ROBERT A.—Experiments on the Control of Poultry Lice.....(Dec.) 1114
HOFFMAN, R. A., and R. O. DRUMMOND—Control of Lice On Livestock and Parasites on Poultry with General Chemical 4072.....(Sci. Note, Oct.) 1052
HOFFMAN, R. A., see R. H. ROBERTS.....(Sci. Note, Oct.) 1047
HOFMASTER, R. N.—Seasonal Abundance of the Cabbage Looper as Related to Light Trap Collections, Precipitation, Temperature and the Incidence of a Nuclear Polyhedrosis Virus.....(Aug.) 796
HOFMASTER, R. N., and L. P. DITMAN—Utilization of a Nuclear Polyhedrosis Virus to Control the Cabbage Looper on Cole Crops in Virginia.....(Oct.) 921
HOLLINGSWORTH, J. P., C. P. BRIGGS, III, and A. L. SCALES—An Electrically Heated Retaining Pen for Insect Larvae.....(Sci. Note, Feb.) 210
HOLLINGSWORTH, JOE P., C. P. BRIGGS, III, PERRY A. GLICK, and HARRY M. GRAHAM—Some Factors Influencing Light Trap Collections.....(Apr.) 305
HOLLINGSWORTH, JOE P., see HARRY M. GRAHAM.....(Aug.) 788
HOOVEN, NORMAN W., see DARRELL W. ANTHONY.....(June) 406

HOPKINS, A. R., see R. E. FYE ..... (Aug.) 622
HOPKINS, D. E., see W. F. CHAMBERLAIN ..... (Aug.) 733
HOPKINS, THEODORE L.—Functions of the Maderia Cockroach (*Leucophaea maderae*) Alimentary Tract in the Absorption, Metabolism, and Excretion of Ronnel ..... (Apr.) 224
HORSFALL, WILLIAM R.—Daily Rate of Oviposition of a Brood of the Mosquito, *Aedes vexans* .. (Sci. Note, Aug.) 807
HOSKINS, W. M., see DANIEL B. MENZEL ..... (Feb.) 9
HOSKINS, W. M., see M. AGOSIN ..... (Apr.) 340
HOSKINS, W. M., see M. E. ELDEFRAWI ..... (June) 401
HOWITT, ANGUS J.—Chemical Control of Slugs in Orchard Grass-Ladino White Clover Pastures in the Pacific Northwest ..... (Aug.) 778
HOWLAND, A. F., see J. WILCON ..... (Apr.) 287
HOY, WALTER and H. T. GORDON—Metabolism of Injected Proline in DDT-Poisoned German Cockroaches ..... (Sci. Note, Feb.) 198
HOYT, STANLEY C.—Evaluation of New Materials for Codling Moth Control in Washington ..... (Dec.) 1127
HOYT, STANLEY, and FORD H. HARRIES—Laboratory and Field Studies on Orchard Mite Resistance to Kelthane ..... (Feb.) 12
HUBER, D. A., see R. C. DOBSON ..... (June) 434
HUDDLESTON, E. W., and GEORGE G. GYRISCO—Residues of Phosdrin® on Alfalfa and Its Effectiveness on the Insect Complex ..... (Sci. Note, Feb.) 209
HUDDLESTON, E. W., see GEORGE G. GYRISCO ..... (Aug.) 718
HUNT, LAWANDA M., see R. D. RADELEFF ..... (Sci. Note, Oct.) 1051
HUNTER, PRESTON E.—Effect of Captan Upon Reproduction in the Two-Spotted Spider Mite, *Tetranychus telarius* ..... (Sci. Note, Feb.) 204

ISAAK, LEWIS W., see MIR S. MULLA ..... (Dec.) 1237
IVEY, M. C., R. H. ROBERTS, H. D. MANN, and H. V. CLABORN—Lindane Residues in Chickens and Eggs Following Poultry House Sprays ..... (June) 487

JAMNBACK, HUGO—The Effectiveness of Chemically Treated Screens in Killing Annoying Punkies, *Culicoides obsoletus* ..... (June) 578
JARVIS, J. L., and G. T. YORK—Population Fluctuations of *Lydella grisescens*, A Parasite of the European Corn Borer ..... (Sci. Note, Feb.) 213
JEPPSON, L. R., J. O. COMPLIN, and M. J. JESSER—Factors Influencing Citrus Red Mite Populations on Navel Oranges and Scheduling of Acaricide Applications in Southern California ..... (Feb.) 55
JESSER, M. J., see L. R. JEPPSON ..... (Feb.) 55
JESTER, K. G., see W. V. CAMPBELL ..... (Aug.) 743
JOHANSEN, C. A.—Laboratory Toxicity of Several Insecticides to the Honey Bee ..... (Oct.) 1008
JOHNSEN, R. E., P. A. DAHM, M. L. FAIRCHILD, and A. E. FREEMAN—Endrin Residues on Corn Stover in Relation to Dairy Cattle Feeding ..... (Sci. Note, Apr.) 398
JOHNSON, NORMAN E., and JOHN W. DUFFIELD—Larvae of *Nomophila noctuella* Feeding on Douglas-fir Nursery Seedlings ..... (Sci. Note, Dec.) 1258
JOHNSON, ROGER B.—Spray Programs to Control Citrus Rust Mite In Florida ..... (Oct.) 977
JOHNSON, WARREN T.—Hog Louse Control by Ground treatment ..... (Sci. Note, Aug.) 821
JOHNSTON, LAWRENCE, and THEODORE E. BLAKESLEE—Stable Fly Tolerance to Residues of DDT, Dieldrin, Malathion, and Diazinon ..... (June) 528
JONES, C. M., see R. H. ROBERTS ..... (Sci. Note, Oct.) 1047
JONES, D. W., see BENJAMIN PUTTLER ..... (Oct.) 878
JONES, ROBERT HENRY—Equipment for Blood Feeding and Holding Large Numbers of *Culicoides* in Experiments with Sheep ..... (Sci. Note, Aug.) 816
JONES, WALTER L., and DWIGHT M. DELONG—A Simplified Technique for Sterilizing the Surface of *Aedes aegypti* Eggs ..... (Sci. Note, Aug.) 813

KALKAT, G. S., R. H. DAVIDSON, and C. L. BRASS—The Effect of Controlled Temperature and Humidity on the Residual Life of Certain Insecticides ..... (Dec.) 1186
KALOOSTIAN, GEORGE H.—Evaluation of Adhesives for Sticky Board Traps ..... (Oct.) 1009
KALOOSTIAN, GEORGE H., see HERSCHEL N. POLLARD ..... (Sci. Note, Aug.) 810
KANTACK, E. J., W. J. MARTIN and L. D. NEWSOM—Incidence of Field Spread of Internal Cork of Sweet Potato in Insecticide-Treated Plots ..... (Feb.) 125
KATIYAR, K. P., and W. H. LONG—Diapause in the Sugarcane Borer, *Diatraea saccharalis* ..... (Apr.) 285
KEENER, PAUL D., see ORIN A. HILLS ..... (Oct.) 970
KELLER, J. C., and B. A. BUTT—Laboratory Tests with Some Phosphoric Acid Esters against Cotton Aphids ..... (Sci. Note, Dec.) 1262
KELLER, J. C., see W. N. SULLIVAN ..... (Aug.) 661
KELLER, J. C., see B. A. BUTT ..... (Sci. Note, Aug.) 813
KELLER, J. C., see J. H. FALES ..... (Dec.) 1147
KELLER, J. C., see B. A. BUTT ..... (Sci. Note, Dec.) 1259
KENAGA, EUGENE E.—Time, Temperature and Concentration Relationships of Several Insecticidal Fumigants ..... (June) 537
KESLER, EARL M., see TIEN-HSI CHENG ..... (Aug.) 751
KILPATRICK, J. W., see H. B. WEINBURGH ..... (Feb.) 114
KINARD, W. S., see C. S. CREIGHTON ..... (Dec.) 1112
KINSEY, M. G., see D. L. MCLEAN ..... (Sci. Note, Dec.) 1256
KLOSTERMEYER, E. C.—Effect of Mite Control on Corn Yield ..... (Sci. Note, June) 608
KLOSTERMEYER, E. C., see RICHARD S. ROBERTSON, JR. ..... (June) 414
KNIPLING, GARY D., W. N. SULLIVAN, and R. A. FULTON—The Survival of Several Species of Insects in a Nitrogen Atmosphere ..... (Sci. Note, Oct.) 1054
KNIPLING, GARY D., see W. N. SULLIVAN ..... (Sci. Note, Oct.) 1054
KNIPLING, GARY D., see W. N. SULLIVAN ..... (Sci. Note, Oct.) 1059
KOEHLER, C. S., see H. Y. FORSYTHE, JR. ..... (Sci. Note, June) 601
KOEHLER, C. S., and GEORGE G. GYRISCO—Responses of the Alfalfa Weevil, *Hypera postica*, to Controlled Environments ..... (Aug.) 625
KOEHLER, C. S., K. D. FEZER, H. H. NEUNZIG, and GEORGE G. GYRISCO—The Economic Importance of the Clover Root Borer ..... (Aug.) 631
KOHLER, PAUL H., and WM. M. ROGOFF—Ruelene Administered Free-Choice in a Mineral Mixture for Cattle Grub Control ..... (Apr.) 278
KOHLER, PAUL H., see WILLIAM M. ROGOFF ..... (Dec.) 1101
KRAUSE, GARY F., see PHILLIP K. HAREIN ..... (Apr.) 261
KRUEGER, H. R., and J. E. CASIDA—Hydrolysis of Certain Organophosphate Insecticides by House Fly Enzymes ..... (Apr.) 239
KULMAN, HERBERT M., and ALEXANDER C. HODSON—Parasites of the Jack-Pine Budworm, *Choristoneura pinus*, with Special Reference to Parasitism at Particular Stand Locations ..... (Apr.) 221
KULMAN, HERBERT M., and ALEXANDER C. HODSON—Feeding and Oviposition Habits of the Jack-Pine Budworm ..... (Dec.) 1138
KULMAN, HERBERT M., and ALEXANDER C. HODSON—The Jack-Pine Budworm as a Pest of Other Conifers with Special Reference to Red Pine ..... (Dec.) 1221

LABRECQUE, G. C.—Studies with Three Alkylating Agents as House Fly Sterilants ..... (Aug.) 684
LABRECQUE, G. C., and H. G. WILSON—Development of Insecticide Resistance in Three Field Strains of House Flies ..... (Sci. Note, Dec.) 1257
LABRECQUE, G. C., see J. B. GAHAN ..... (Feb.) 63
LAMBREMONT, EDWARD N., and N. W. EARLE—Longevity of the Boll Weevil Under Laboratory Conditions ..... (Oct.) 964
LANCASTER, J. L., JR., see JOSEPH S. SIMCO ..... (Sci. Note, Feb.) 208
LANDIS, B. J., see RALPH SCHOPP ..... (Sci. Note, June) 604
LANDIS, B. J., see RALPH SCHOPP ..... (Oct.) 1003
LANGE, W. HARRY—Pavement Ant Attacking Sugar Beets in California ..... (Sci. Note, Oct.) 1063

LANGE, W. H., see A. A. GRIGARICK ..... (Feb.) 36
LARRIMER, WALTER H., see MORTIMER D. LEONARD ..... (Obituary, Aug.) 825
LATTIN, J. D., see E. A. DICKASON ..... (Apr.) 219
LAWSON, F. R., R. L. RABB, F. E. GUTHRIE, and T. G. BOWERY—Studies of an Integrated Control System for Hornworms on Tobacco ..... (Feb.) 93
LEACH, CHARLES M., E. A. DICKASON and A. E. GROSS—Effects of Insecticides on Insects and Pathogenic Fungi Associated with Alsike Clover Roots ..... (June) 543
LEE, ARTHUR A., see HARVEY I. MAGY (Sci. Note, Feb.) 206
LEE, HONG SUK, see S. G. STEPHENS ..... (Dec.) 1085
LEE, L., see P. A. DAHM ..... (Apr.) 343
LEE, SUNG-YANG—Tests with Some Insecticides against the Paddy Borer, *Schoenobius incertulas*, in Taiwan ..... (Aug.) 707
LEE, WILLIAM R.—The Nonrandom Distribution of Foraging Honey Bees Between Apiaries ..... (Oct.) 928
LEGNER, E. FRED, see EARL R. OATMAN ..... (Oct.) 1034
LEIGH, THOMAS F.—Insecticidal Susceptibility of *Nysius raphanus* a Pest of Cotton ..... (Feb.) 120
LEONARD, DAVID E.—Development of Resistance to DDT by the Apple Maggot, *Rhagoletis pomonella* ..... (Oct.) 880
LEONARD, MORTIMER D., and WALTER H. LARRIMER—Joseph Sanford Wade (1880–1961) ..... (Obituary, Aug.) 825
LEVIN, M. D.—Distribution of Foragers from Honey Bee Colonies Placed in the Middle of a Large Field of Alfalfa ..... (June) 431
LEVIN, M. D.—The Dispersion of Field Bees on Alfalfa in Relation to a Neighboring Apiary ..... (June) 482
LEWIS, LEYBURN F., and GAINES W. EDDY—Laboratory Evaluation of Insecticides against the Adult Horn Fly ..... (Apr.) 392
LICHTENSTEIN, E. P., and K. R. SCHULZ—Effect of Soil Cultivation, Soil Surface and Water on the Persistence of Insecticidal Residues in Soils ..... (June) 517
LICHTENSTEIN, E. P., see C. R. HARRIS ..... (Oct.) 1038
LICHTENSTEIN, E. P., see EARL R. OATMAN ..... (Sci. Note, Oct.) 1056
LILLY, C. E., see A. M. HARPER ..... (Oct.) 895
LILLY, J. H., see PETER C. STEVE ..... (Dec.) 1229
LINCOLN, CHARLES, see LAMAR C. BROWN ..... (Apr.) 309
LINDGREN, D. L., see R. G. STRONG ..... (Feb.) 21
LINDGREN, D. L., see R. G. STRONG ..... (Aug.) 764
LINDQUIST, D. A., J. R. BRAZZEL, and T. B. DAVICH—Fate of DDT and Toxaphene Applied Topically to Susceptible and Resistant Boll Weevils ..... (Apr.) 299
LINDQUIST, D. A., JOSEPH HACSKAYLO, and T. B. DAVICH—Laboratory and Field Investigations with Phorate-Treated Cotton Seeds ..... (Apr.) 379
LINDQUIST, D. A., JOSEPH HACSKAYLO, J. C. CLARK, and T. B. DAVICH—Systemic Activity of Dimethoate Applied to Cotton Seeds ..... (Dec.) 1132
LINDQUIST, D. A., see JOSEPH HACSKAYLO ..... (June) 411
LINDQUIST, D. A., see JOSEPH HACSKAYLO ..... (Dec.) 1206
LIPPOLD, PAUL C.—A Laboratory Evaluation of Ethion with Other Acaricides against the Adult Two-Spotted Spider Mite, *Tetranychus telarius* ..... (Feb.) 166
LLOYD, E. P., J. L. MCMEANS, and M. E. MERKL—Preferred Feeding and Egg Laying Sites of the Boll Weevil and the Effect of Weevil Damage on the Cotton Plant ..... (Oct.) 979
LLOYD, E. P., and M. E. MERKL—Seasonal Occurrence of Diapause in the Boll Weevil in Mississippi ..... (Dec.) 1214
LOAN, CONRAD—Introduction of European Parasites of *Sitona* spp. for Control of the Sweetclover Weevil, *Sitona cylindricollis*, in Canada ..... (Oct.) 1026
LOCKLEY, A. S., see A. W. A. BROWN ..... (Aug.) 670
LOFGREN, C. S., V. E. ADLER, and W. F. BARTHEL—Effect of Some Variations in Formulation or Application Procedure on Control of Imported Fire Ants with Granular Heptachlor ..... (Feb.) 45
LOFGREN, C. S., F. J. BARTLETT, and C. E. STRINGER—Imported Fire Ant Toxic Bait Studies: The Evaluation of Various Food Materials ..... (Dec.) 1096
LOFGREN, C. S., see F. J. BARTLETT ..... (Feb.) 70
LOFGREN, C. S., see L. H. DAWSEY ..... (Sci. Note, Dec.) 1264
LONG, W. H., L. D. NEWSOM, and A. M. MULLINS—Endrin Residues in the Fat of Lambs Grazed on Endrin-Treated Pasture ..... (Sci. Note, June) 605
LONG, W. H., S. D. HENSLEY, E. J. CONCIENNE, and W. J. MCCORMICK—Field Tests with New Insecticides for Sugarcane Borer Control in Louisiana in 1960 ..... (Dec.) 1155
LONG, W. H., see S. D. HENSLEY ..... (Feb.) 146
LONG, W. H., see YUNG-SONG PAN ..... (Apr.) 257
LONG, W. H., see K. P. KATIYAR ..... (Apr.) 285
LONG, W. H., see S. D. HENSLEY ..... (Dec.) 1153
LOPEZ, D. F., see R. H. RHODE ..... (Sci. Note, Feb.) 202
LOVELACE, STUART A., see WILLIAM C. MARQUARDT ..... (Apr.) 252
LOWRY, WILLIAM L., and CHING H. TSAO—Incidence of Pink Bollworm Resistance to DDT ..... (Dec.) 1209
LOWRY, W. L., see R. L. MCGARR ..... (Oct.) 972

MACCREARY, DONALD and W. A. CONNELL—Clover Mite Control Studies ..... (Sci. Note, Oct.) 1062
MADSEN, HAROLD F., PETER H. WESTIGARD, and LOUIS A. FALCON—Evaluation of Insecticides and Sampling Methods against the Apple Aphid, *Aphis pomi* (Oct.) 892
MADSEN, HAROLD F., and JAMES MARSHALL—Dormant Sprays for the Control of the Pear Psylla, *Psylla pyricola*, in British Columbia ..... (Oct.) 1000
MAGY, HARVEY I., and ARTHUR A. LEE—Occurrence of *Hippelates* Eye Gnats in a Coastal Habitat in California ..... (Sci. Note, Feb.) 206
MALO, FEDERICO—Phoresy in *Xenufens* (Hymenoptera: Trichogrammatidae), A Parasite of *Caligo eurilochus* (Lepidoptera: Nymphalidae) ..... (June) 465
MALO, FEDERICO, and EDWIN R. WILLIS—Life History and Biological Control of *Caligo eurilochus*, A Pest of Banana ..... (June) 530
MANGLITZ, G. R., and H. J. GORZ—Resistance of Sweetclover to the Sweetclover Aphid ..... (Dec.) 1156
MANN, H. D., see M. C. IVEY ..... (June) 487
MARCH, R. B., see G. P. GEORGHIOU ..... (Feb.) 132
MARQUARDT, WILLIAM C., and STUART A. LOVELACE—A Comparison of Dimethoate Administered as an Injection and in Supplemental Feed for Control of Cattle Grubs ..... (Apr.) 252
MARSHALL, JAMES, see HAROLD F. MADSEN ..... (Oct.) 1000
MARTIGNONI, MAURO E., and JAMES E. MILSTEAD—A Technique for Individual Rearing of Small Phytophagous Insects ..... (Sci. Note, June) 609
MARTIN, W. J., see E. J. KANTACK ..... (Feb.) 125
MATSUMURA, F., and A. W. A. BROWN—Biochemistry of Malathion Resistance in *Culex tarsalis* ..... (Dec.) 1176
MAXWELL, C. W.—Laboratory Tests of Some Insecticides against Adults of the Apple Maggot, *Rhagoletis pomonella* ..... (June) 526
MAYER, M. S., and J. R. BRAZZEL—Certain Biological Effects Produced in the Boll Weevil by Tagging It with P^{32} ..... (Dec.) 1197
MCCLELLAN, W. D., see THOMAS J. HENNEBERRY (Feb.) 61
MCCOMBS, C. L., see CHARLES H. BRETT ..... (Dec.) 1191
MCCORMICK, W. J., see S. D. HENSLEY ..... (Feb.) 146
MCCORMICK, W. J., see S. D. HENSLEY ..... (Dec.) 1153
MCCORMICK, W. J., see W. H. LONG ..... (Dec.) 1155
MCCOY, C. E., and T. A. BRINDLEY—Biology of the Four-Spotted Fungus Beetle, *Glischrochilus q. quadrisignatus*, and its Effect on European Corn Borer Populations ..... (Aug.) 713
MCCRAY, ELMO M., JR.—A Mechanical Device for the Rapid Sexing of *Aedes aegypti* Pupae (Sci. Note, Aug.) 819
MCEWEN, F. L., see A. C. DAVIS ..... (Feb.) 161
MCGARR, R. L., A. J. CHAPMAN, and W. L. LOWRY—Field Tests with Insecticides for Pink Bollworm Control in 1958 ..... (Oct.) 972
MCGOUGH, JAMES M., see EDGAR W. CLARK ..... (Feb.) 4
MCGREGOR, W. S., see J. WEINTRAUB ..... (Feb.) 84
MCINTYRE, T., and S. R. DUTKY—Aerial Application of Virus for Control of a Pine Sawfly, *Neodiprion pratti pratti* ..... (Sci. Note, Aug.) 809
MCLEAN, DONALD L.—The Effect of Wing Movement by the Green Peach Aphid on the Transmission of Lettuce

Mosaic Virus.....(Dec.) 1135
McLEAN, D. L., and M. G. KINSEY—A Method for Rearing the Lettuce Root Aphid, *Pemphigus bursarius*.....(Sci. Note, Dec.) 1256
McMEANS, J. L., see E. P. LLOYD.....(Oct.) 979
MENZEL, DANIEL B., S. M. SMITH, RAYMOND MISKUS, and W. M. HOSKINS—The Metabolism of C^{14}-Labeled DDT in the Larvae, Pupa, and Adults of *Drosophila melanogaster*.....(Feb.) 9
MERKL, M. E., see E. P. LLOYD.....(Oct.) 979
MERKL, M. E., see E. P. LLOYD.....(Dec.) 1214
METCALF, R. L., see G. P. GEORGHIOU.....(Feb.) 132, 150
METCALF, R. L., see G. P. GEORGHIOU.....(Apr.) 231
METCALF, R. L., see T. R. FUKUTO.....(Oct.) 955
MICHAELI, D., see M. AGOSIN.....(Apr.) 340
MICHELBACHER, A. E., and CLARENCE S. DAVIS—The Naval Orangeworm in Northern California.....(June) 559
MICKS, DON W., and M. R. V. MURTHY—The Effects of DDT on Oxidative Metabolism in Susceptible and DDT-Resistant *Aedes aegypti*.....(June) 461
MICKS, DON W., see M. R. V. MURTHY.....(June) 513
MILLER, WILLIAM E., and DEAN L. HAYNES—Experiments with Concentrated DDT Sprays for European Pine Shoot Moth Suppression in Forest Plantations.....(Oct.) 1014
MILLERS, IMANTS—Temporary Storage of Living Soil and Bark Inhabiting Coleopterous Larvae in Water.....(Sci. Note, June) 610
MILSTEAD, JAMES E., MAURO E. MARTIGNONI.....(Sci. Note, June) 609
MISKUS, RAYMOND, see DANIEL B. MENZEL.....(Feb.) 9
MISKUS, R., see M. AGOSIN.....(Apr.) 340
MISRA, C. P., C. M. CHRISTENSEN, and A. C. HODSON—The Angoumois Grain Moth, *Sitotroga cerealella*, and Storage Fungi.....(Oct.) 1032
MITLIN, NORMAN, and CHARLES F. COHEN—The Composition of Ribonucleic Acid in the Developing House Fly Ovary.....(Aug.) 651
MITLIN, NORMAN, see W. A. GERSDORFF.....(June) 580
MITLIN, NORMAN, see W. A. GERSDORFF.....(Aug.) 731
MITTLER, TOM E., and EDWARD S. SYLVESTER—A Comparison of the Injury to Alfalfa by the Aphids, *Therioaphis maculata* and *Macrosiphum pisi*.....(Aug.) 615
MOFFITT, H. R., and F. R. YARUSS—*Dasiops alveofrons*, a New Pest of Apricots in California.....(June) 504
MONRO, H. A. U., see E. J. BOND.....(June) 451
MOORE, STEVE, III, and G. C. DECKER—Control of the Angoumois Grain Moth, *Sitotroga cerealella* in Stored Earcorn with Malathion in Illinois, 1959–1960.....(June) 479
MORSE, ROGER A.—The Effect of Sevin on Honey Bees.....(June) 566
MUESEBECK, C. F. W.—An Important Russian Entomological Journal.....(Editorial, Oct.) 1068
MULLA, MIR A.—Control of *Hippelates* Gnats with Soil Treatments Using Organochlorine Insecticides.....(Aug.) 636
MULLA, MIR S., GEORGE P. GEORGHIOU, and HARRY W. CRAMER—Residual Activity of Organophosphorus Insecticides in Soil as Tested against the Eye Gnat, *Hippelates collusor*.....(Oct.) 865
MULLA, MIR S., and LEWIS W. ISAAK—Field Studies on the Toxicity of Insecticides to the Mosquito Fish, *Gambusia affinis*.....(Dec.) 1237
MULLA, M. S., see G. P. GEORGHIOU.....(Apr.) 264
MULLA, M. S., see G. P. GEORGHIOU.....(Aug.) 695
MULLINS, A. M., see W. H. LONG.....(Sci. Note, June) 605
MURTHY, M. R. V., and DON W. MICKS—Intracellular Distribution of TPN-Isocitric Dehydrogenase Activity in Susceptible and Insecticide-Resistant Strains of *Aedes aegypti*.....(June) 513
MURTHY, M. R. V., see DON W. MICKS.....(June) 461
MUTHU, M.—An Airflow Indicator to Aid in Fumigant Sampling.....(Sci. Note, Oct.) 1064
MYSER, WILLARD C., see C. JOHN HAY.....(Sci. Note, Dec.) 1260

NABER, EDWARD C., see GEORGE W. WARE.....(Aug.) 675
NAEGELE, J. A., see H. E. ALLER.....(June) 511
NAGASAWA, S., see M. AGOSIN.....(Apr.) 340
NAKATA, S., and Y. TANADA—Phytotoxicity of Wetting Agents on Lychee.....(Dec.) 1074
NERNEY, N. J.—Effects of Seasonal Rainfall on Range Condition and Grasshopper Population, San Carlos Apache Indian Reservation, Arizona.....(Apr.) 382
NEUNZIG, H. H., see C. S. KOEHLER.....(Aug.) 631
NEWSOM, L. D., see E. J. KANTACK.....(Feb.) 125
NEWSOM, L. D., see W. H. LONG.....(Sci. Note, June) 605
NICKEL, JOHN L.—Control of Red Rust Thrips on Bananas in Honduras.....(Dec.) 1071
NIELSON, M. W., and E. E. BLEAK—An Apparatus for Separating and Collecting Live Insects.....(Sci. Note, Aug.) 800
NOBLE, L. W., see A. J. CHAPMAN.....(Aug.) 791
NORRIS, DALE M., JR., and HARRY C. COPPEL—Translocation and Stability of Chipman R-6199 in *Pinus strobus* as Related to Its Control of the Introduced Pine Sawfly, *Diprion similis*.....(Feb.) 159
NORRIS, DALE M., JR., see ABULLA F. AL-AZAWI.....(Feb.) 127
NORRIS, DALE M., JR., see HARRY C. COPPEL.....(Sci. Note, Oct.) 1061

OATMAN, EARL R., and E. FRED LEGNER—Bionomics of the Apple Aphid, *Aphis pomi*, on Young Nonbearing Apple Trees.....(Oct.) 1034
OATMAN, EARL R., and E. P. LICHTENSTEIN—Control of the Apple Maggot and Plum Curculio with Soil Insecticides.....(Sci. Note, Oct.) 1056
O'BRIEN, R. D.—Esterase Inhibition in Organophosphorus Poisioning of House Flies.....(Dec.) 1161
O'BRIEN, R. D., and E. H. SMITH—The Uptake and Metabolism of Parathion by Insect Eggs.....(Feb.) 187
OLIVER, A. D., see LORRAINE PHILLIPS.....(Dec.) 1131
ONSAGER, J. A., and J. T. SCHULZ—The Role of Insecticide-Fertilizer Combinations in Influencing Development of Sugar Beets.....(Aug.) 720
OSGOOD, C. E., see P. H. SCHWARTZ, JR.....(Aug.) 663

PALMER, JOHN G., see T. J. HENNEBERRY.....(Aug.) 659
PAN, YUNG-SONG, and W. H. LONG—Diets for Rearing the Sugarcane Borer.....(Apr.) 257
PAPPAS, JOSEPH L., and GLENN E. CARMAN—Control of European Brown Snail in Citrus Groves in Southern California with Guthion and Metaldehyde Sprays.....(Feb.) 152
PARENCIA, C. R., JR., see J. W. DAVIS.....(Oct.) 966
PARENCIA, C. R., JR., see C. B. COWAN, JR.....(Oct.) 1011
PARKER, HARRY L., see G. J. HAEUSSLER.....(Obituary, Feb.) 217
PARRISH, DALE W.—The Ticks (Argasidae and Ixodidae) of Turkey.....(Feb.) 91
PATEL, N. G., and L. K. CUTKOMP—The Toxicity of Enzyme Fractions of *Bacillus larrae*.....(Aug.) 773
PENCE, ROY J.—*Tribolium* and Cockroach Control with Kepone Bait in Fabric Insect Culture Cabinets.....(Sci. Note, Aug.) 821
PERKINS, B. D., JR., and J. M. GRAYSON—Some Biological Comparisons of Resistant and Non-Resistant Strains of the German Cockroach, *Blattella germanica*.....(Aug.) 747
PHILLIPS, J. H. H., see E. H. SMITH.....(Dec.) 1165
PHILLIPS, LORRAINE, A. D. OLIVER, and LUCILLE FINLEY—Cotton Fiber Quality as Related to Some Cotton Insect Control Programs and Time of Fruit Setting.....(Dec.) 1131
PIQUETT, P. G., see W. A. GERSDORFF.....(June) 580
PIQUETT, P. G., see W. A. GERSDORFF.....(Aug.) 731
PIQUETT, P. G., see W. A. GERSDORFF.....(Dec.) 1250
PIMENTEL, DAVID—An Ecological Approach to the Insecticide Problem.....(Feb.) 108
PIMENTEL, DAVID—An Evaluation of Insect Resistance in Broccoli, Brussels Sprouts, Cabbage, Collards, and Kale.....(Feb.) 156
PIMENTEL, DAVID—Natural Control of Aphid Populations on Cole Crops.....(Oct.) 885
PIMENTEL, DAVID—Natural Control of Caterpillar Populations on Cole Crops.....(Oct.) 889
PLAPP, FREDERICK W., JR., and WALTER S. BIGLEY—Inhibition of House Fly Ali-Esterase and Cholinesterase

under *in vivo* Conditions by Parathion and Malathion ..... (Feb.) 103
PLAPP, FREDERICK W., JR., WALTER S. BIGLEY, DARRELL I. DARROW, and GAINES W. EDDY—Studies of Parathion Metabolism in Normal and Parathion-Resistant House Flies ..... (Apr.) 389
PLAPP, FREDERICK W., JR., and WALTER S. BIGLEY—Carbamate Insecticides and Ali-Esterase Activity in Insects ..... (Aug.) 793
PLAPP, FREDERICK W., see WALTER S. BIGLEY ..... (Oct.) 904
POLLARD, HERSCHEL N., and GEORGE H. KALOOSTIAN—Overwintering Habits of *Homalodisca coagulata*, the Principal Natural Vector of Phony Peach Disease Virus ..... (Sci. Note, Aug.) 810
PRICE, RICHARD G., R. R. WALTON, and W. A. DREW—Arthropod Pests Collected in Oklahoma Greenhouses ..... (Sci. Note, Aug.) 819
PRICE, DOUGLAS W., and FRANCIS M. SUMMERS—Cyclical Changes in Numbers of Moths and Larvae of the Peach Twig Borer in California ..... (Oct.) 933
PRUESS, K. P.—Distribution of Army Cutworm Larvae in Wheat and Barley Fields ..... (Apr.) 250
PRUESS, K. P.—Oviposition Response of the Army Cutworm, *Chorizagrotis auxiliaris*, to Different Media ..... (Apr.) 273
PUTTLER, BENJAMIN, D. W. JONES, and L. W. COLES—Introduction, Colonization, and Establishment of *Bathyplectes curculionis*, A Parasite of the Alfalfa Weevil in the Eastern United States ..... (Oct.) 878

RABB, R. L., see F. R. LAWSON ..... (Feb.) 93
RACE, S. R.—Early-Season Thrips Control on Cotton in New Mexico ..... (Oct.) 974
RADELEFF, R. D., LAWANDA M. HUNT, and CARL P. WEIDENBACH—Toxicity Studies of General Chemical 4072 and Two Related Compounds to Cattle ..... (Sci. Note, Oct.) 1051
RADELEFF, R. D., see R. H. ROBERTS ..... (Sci. Note, Oct.) 1053
RAFFENSPERGER, E. M., see J. C. HARSHBARGER ..... (Feb.) 74
RAINWATER, JULIAN C., see W. N. SULLIVAN ..... (Sci. Note, Oct.) 1059
RANDOLPH, N. M., see J. P. GOODE ..... (Apr.) 301
RANNEY, C. D., see JOSEPH HACSKAYLO ..... (Apr.) 296
RATCLIFFE, ROGER H., L. P. DITMAN, and J. T. WHITLAW, JR.—Field Experiments on Insecticidal Control of Insect Pests of Cabbage and Broccoli ..... (Apr.) 356
RAUN, EARLE S., and FRANK E. FRENCH—Practical Application Methods for Systemic Cattle Grub Control ..... (June) 428
RAWLINS, W. A., see L. S. THOMPSON ..... (Dec.) 1173
READ, D. C., and D. B. ROBINSON—Scabbing of Rutabagas after Applications of Heptachlor, Parathion, and Lime to Mineral Soils of Various Acidities ..... (Sci. Note, Feb.) 193
REED, D. K., and PERRY L. ADKISSON—Short-Day Cotton Stocks as Possible Sources of Host Plant Resistance to the Pink Bollworm ..... (June) 484
REID, WILLIAM W., see M. H. FARRIER ..... (Aug.) 692
REYNOLDS, H. T., see MOHIB ZAKI ..... (June) 568
REYNOLDS, H. T., see D. C. ERWIN ..... (Oct.) 855
RHODE, R. H., F. LOPEZ D., F. EGUISA, and J. TELICH C.—Effect of Gamma Radiation of the Reproductive Potential of Mexican Fruit Fly ..... (Sci. Note, Feb.) 202
RICHMOND, CLYDE A., and EDGAR W. CLARK—Activity of Larvae and Pupae of the Pink Bollworm Subjected to Burial ..... (Aug.) 789
RICHMOND, CLYDE A., see EDGAR W. CLARK ..... (Feb.) 4
RICHMOND, CLYDE A., see EDGAR W. CLARK ..... (Sci. Note, Dec.) 1262
RIDGWAY, R. L., and GEORGE G. GYRISCO—Control of the Tarnished Plant Bug, *Lygus lineolaris*, on Birdsfoot Trefoil Grown for Seed ..... (Apr.) 244
RIEHL, L. A., see H. A. DEAN ..... (Apr.) 333
RIEHL, L. A., see J. L. RODRIGUEZ ..... (Dec.) 1212
RIVIELLO, M. SANCHEZ, see J. G. SHAW ..... (Aug.) 666
ROAN, CLIFFORD C., see ROBERT L. HARRIS ..... (Feb.) 40
ROBERTS, R. H., M. J. WRICH, R. A. HOFFMAN, and C. M. JONES—Control of Horn Flies and Stable Flies with Three General Chemical Compounds ..... (Sci. Note, Oct.) 1047
ROBERTS, R. H., R. D. RADELEFF, and H. V. CLABORN—Residues in the Milk of Dairy Cows Sprayed with P^{32}-Labeled General Chemical 4072 ..... (Sci. Note, Oct.) 1053
ROBERTS, R. H., see M. C. IVEY ..... (June) 487
ROBERTSON, O. T., see A. J. CHAPMAN ..... (Aug.) 791
ROBERTSON, O. T., see H. M. GRAHAM ..... (Sci. Note, Oct.) 1057
ROBERTSON, RICHARD S., JR., and E. C. KLOSTERMEYER—Aphid Transmission of Bean Viruses in Field Beans in Central Washington ..... (June) 414
ROBINSON, D. B., see D. C. READ ..... (Sci. Note, Feb.) 193
ROCK, G. C., C. H. HILL, and J. M. GRAYSON—Toxicity of TDE to Different Instars and Strains of the Red-Banded Leaf Roller, and the Response of a TDE-Resistant Strain to Parathion and Endrin ..... (Feb.) 88
RODDY, L. R., see S. D. HENSLEY ..... (Feb.) 146
RODRIGUEZ, J. G.—Systemic Insecticides as Soil Treatments for Control of the Mimosa Webworm, *Homadaula albizziae* ..... (June) 523
RODRIGUEZ, J. G., and J. MILTON CAMPBELL—Effects of Gibberellin on Nutrition of the Mites, *Tetranychus telarius* and *Panonychus ulmi* ..... (Oct.) 984
RODRIGUEZ, J. G., see J. A. WALLWORK ..... (Aug.) 701
RODRIGUEZ, J. L., and L. A. RIEHL—Sticktight Flea Control on Chickens with Malathion Dust Self-Treatment ..... (Dec.) 1212
ROGOFF, WILLIAM M., and PAUL H. KOHLER—Horn Fly Control by the Pour-on Technique Using Ruelene or Toxaphene ..... (Dec.) 1101
ROGOFF, WM. M., see PAUL H. KOHLER ..... (Apr.) 278
ROHWER, G. G., see L. F. STEINER ..... (Feb.) 30
ROSS, ERNEST, see MARTIN SHERMAN ..... (June) 573
ROTH, A. R., and GAINES W. EDDY—Field Tests with New Cattle Grub Systemics ..... (Sci. Note, Feb.) 203
ROTH, A. R., see GAINES W. EDDY ..... (June) 408
RUSSELL, MERCER P.—A Simple Rearing Medium for the Indian Meal Moth, *Plodia interpunctella* ..... (Sci. Note, Aug.) 812

SABROSKY, CURTIS W.—Our First Decade with the Face Fly, *Musca autumnalis* ..... (Aug.) 761
SANJEAN, JOHN, see YUN-PEI SUN ..... (Oct.) 841
SATPATHY, B. N., see N. SHI ..... (June) 437
SBUR, D. E., see R. G. STRONG ..... (Apr.) 235
SBUR, D. E., see R. G. STRONG ..... (June) 489
SCALES, A. L., see J. P. HOLLINGSWORTH ..... (Sci. Note, Feb.) 210
SCHECHTER, M. S., see W. N. SULLIVAN ..... (Aug.) 661
SCHLINGER, E. I., see T. W. FISHER ..... (Sci. Note, Feb.) 196
SCHMIDT, CLAUDE H., and DONALD E. WEIDHAAS—The Toxicological Action of Three Organophosphorus Insecticides with Three Species of Mosquito Larvae ..... (June) 583
SCHMIDT, CLAUDE H., see DONALD E. WEIDHAAS ..... (Feb.) 175
SCHOOF, H. F., see H. B. WEINBURGH ..... (Feb.) 114
SCHOPP, RALPH, and B. J. LANDIS—A Portable Sprayer for Experimental Plots ..... (Sci. Note, June) 604
SCHOPP, RALPH, B. J. LANDIS, and G. T. HAGEL—Experiments with Insecticides for Control of the Green Peach Aphid on Potatoes ..... (Oct.) 1003
SCHREIBER, K., see W. R. ALLEN ..... (Feb.) 178, 181
SCHROEDER, W. T., see A. C. DAVIS ..... (Feb.) 161
SCHULZ, J. T.—A Physiological Response of Potato to Foliar Applications of the Insecticide, Guthion ..... (Oct.) 839
SCHULZ, J. T., see J. A. ONSAGER ..... (Aug.) 720
SCHULZ, J. T., see MYRON A. ANDERSON ..... (Oct.) 827
SCHULZ, K. R., see E. P. LICHTENSTEIN ..... (June) 517
SCHUSTER, MICHAEL F., see H. A. DEAN ..... (Oct.) 952
SCHWARTZ, P. H., JR., C. E. OSGOOD, and L. P. DITMAN—Experiments with Granulated Systemic Insecticides for Control of Insects on Potatoes, Lima Beans and Sweet Corn ..... (Aug.) 663
SENGUPTA, G. C., see N. SHI ..... (June) 437
SEMEL, MAURIE—The Efficiency of the Polyhedrosis Virus and *Bacillus thuringiensis* for Control of the Cabbage Looper on Cauliflower ..... (Aug.) 698
SFERRA, P. R.—A Direct Feeding Method for Bioassay of

Insecticide Residue in Soil with *Drosophila* ..... (Sci. Note, Aug.) 822
SHAW, J. G.—Airplane Applications of Malathion Bait Spray for Mexican Fruit Fly Control (Sci. Note, June) 600
SHAW, J. G., and M. SANCHEZ RIVIELLO—Exploratory Studies with Soil Toxicants to Control the Mexican Fruit Fly ..... (Aug.) 666
SHEETS, LOUIS W., see DONALD M. TUTTLE ..... (Feb.) 67
SHEETS, L. W., see GEORGE P. WENE ..... (Sci. Note, Feb.) 192
SHENEFELT, R. D., see T. C. ALLEN ..... (Sci. Note, Oct.) 1055
SHEPARD, HAROLD H.—WENDELL FOLSOM SELLERS (1903–1960) ..... (Obituary, June) 613
SHERMAN, MARTIN, AND ERNEST ROSS—Toxicity to House Fly Larvae of Droppings from Chicks Administered Insecticides in Feed, Water, and as Single Oral Dosages ..... (June) 573
SHI, N., G. C. SENGUPTA, and B. N. SATPATHY—Toxicity of Some Insecticides to the Red Flour Beetle, *Tribolium castaneum* ..... (June) 437
SHOREY, H. H.—Effect of Various Insecticide Treatments on Populations of the Green Peach Aphid on Peppers in Southern California ..... (Apr.) 279
SHOREY, H. H.—Synergism of Carbamate Insecticides against Cabbage Looper and Beet Armyworm Larvae ..... (Dec.) 1243
SHOREY, H. H., see I. M. HALL ..... (Feb.) 141
SHULTZ, G. R., see J. V. SMITH ..... (Dec.) 1091
SIMCO, JOSEPH S., and J. L. LANCASTER, JR.—Control of Cattle Grubs and Horn Flies by Summer Dipping with Co-Ral ..... (Sci. Note, Feb.) 208
SKOOG, F. E., F. T. COWAN, and R. V. CONNIN—Laboratory and Field Tests of New Insecticides for Grasshopper Control ..... (Feb.) 170
SLEESMAN, J. P., see DAN WOLFENBARGER ..... (Aug.) 705
SLEESMAN, J. P., see DAN WOLFENBARGER ..... (Oct.) 846, 1018
SLEESMAN, J. P., see DAN WOLFENBARGER ..... (Dec.) 1077
SMITH, BERNARD C.—Influence of Water and Previous Food on the Longevity of Unfed Larvae of *Coleomegilla maculata lengi* ..... (Sci. Note, Feb.) 194
SMITH, C. L., see M. J. WRICH ..... (Sci. Note, Oct.) 1049
SMITH, CARROLL N.—Designation of Insecticides by Trademarked Names or Code Numbers in Society Publications ..... (Oct.) 1066
SMITH, CLYDE F.—WALTER M. KULASH (1912–1960) ..... (Obituary, Apr.) 400
SMITH, CLYDE F.—BENTLY BALL FULTON (1889–1960) ..... (Obituary, June) 613
SMITH, E. H.—Control of the Peach Tree Borer with Guthion, Parathion, and Thiodan ..... (Aug.) 668
SMITH, E. H., and J. H. H. PHILLIPS—The Influence of Oil Viscosity and Timing of Treatment on Semidormant Control of European Fruit Lecanium ..... (Dec.) 1165
SMITH, E. H., see R. D. O'BRIEN ..... (Feb.) 187
SMITH, E. H., see J. O. STEVENSON ..... (Apr.) 283
SMITH, FLOYD F., and PHILIP BRIERLEY—Ornamental Plants as Virus Reservoirs ..... (June) 506
SMITH, FLOYD F., see THOMAS J. HENNEBERRY ..... (Feb.) 61
SMITH, F. F., see T. J. HENNEBERRY ..... (Apr.) 233
SMITH, F. F., see T. J. HENNEBERRY ..... (June) 420
SMITH, J. V., J. C. STREET, G. R. SCHULTZ and L. E. HARRIS—Dieldrin Residue on Vegetation in an Irrigated Pasture ..... (Dec.) 1091
SMITH, RICHARD H.—Techniques for Determining the Toxicity of Pine Resin Vapors to *Dendroctonus brevicomis* and *D. jeffreyi* ..... (Apr.) 359
SMITH, RICHARD H.—The Fumigant Toxicity of Three Pine Resins to *Dendroctonus brevicomis* and *D. jeffreyi* ..... (Apr.) 365
SMITH, S. M., see DANIEL B. MENZEL ..... (Feb.) 9
SMOCK, R. M., see E. H. GLASS ..... (Oct.) 915
SNAPP, OLIVER I.—Treatment of Peach Nursery Stock to Prevent Infestation by the Peach Tree Borer ..... (Sci. Note, Apr.) 400
SOLOMON, J. D., see A. T. DROOZ ..... (Sci. Note, Oct.) 1060
SPARKS, A. N., see G. T. BOTTGER ..... (Sci. Note, Dec.) 1261
SPIELMAN, ANDREW—Susceptibility of an Eye Gnat, *Hippelates pusio*, to Residual Insecticides ..... (Feb.) 130
SPINK, WILLIAM T., and JAMES R. DOGGER—Chemical Control of the Ground Pearl, *Eumargarodes laingi* ..... (June) 423
STAFFORD, E. M., see JALIL K. ABUL-HAB ..... (June) 591
STEINER, L. F., G. G. ROHWER, ED I. AYERS, and L. D. CHRISTENSON—The Role of Attractants in the Recent Mediterranean Fruit Fly Eradication Program in Florida ..... (Feb.) 30
STEPHEN, W. P.—Artificial Nesting Sites for the Propagation of the Leaf-Cutter Bee, *Megachile* (*Eutricharaea*) *rotundata* for Alfalfa Pollination ..... (Oct.) 989
STEPHENS, S. G., and HONG SUK LEE—Further Studies on the Feeding and Oviposition Preferences of the Boll Weevil (*Anthonomus grandis*) ..... (Dec.) 1085
STERN, VERNON M.—Further Studies of Integrated Control Methods against the Egyptian Alfalfa Weevil in California ..... (Feb.) 50
STEVE, PETER C., DONALD L. ANDERSON, and J. H. LILLY—Effects of Dietary Guthion on Baby Chicks ..... (Dec.) 1229
STEVENSON, A. B., see G. G. DUSTAN ..... (Oct.) 918
STEVENSON, J. O., and E. H. SMITH—Fecundity and Fertility of Two Strains of the Plum Curculio, Reciprocal Crosses and the F_1 Generations ..... (Apr.) 283
STREET, J. C., see J. V. SMITH ..... (Dec.) 1091
STRINGER, C. E., see C. S. LOFGREN ..... (Dec.) 1096
STRINGFIELD, G. H., see W. D. GUTHRIE ..... (Apr.) 267
STRINGFIELD, G. H., see W. D. GUTHRIE ..... (Aug.) 784
STRONG, R. G., and D. L. LINDGREN—Germination of Small Legume Seeds after Fumigation with Methyl Bromide and Hydrocyanic Acid ..... (Feb.) 21
STRONG, R. G., and D. E. SBUR—Evaluation of Insecticides as Protectants against Pests of Stored Grain and Seeds ..... (Apr.) 235
STRONG, R. G., D. E. SBUR, and R. G. ARNDT—Influence of Formulation on the Effectiveness of Malathion, Methoxychlor, and Synergized Pyrethrum Protective Sprays for Stored Wheat ..... (June) 489
STRONG, R. G., and D. L. LINDGREN—Effect of Methyl Bromide and Hydrocyanic Acid Fumigation on the Germination of Corn Seed ..... (Aug.) 764
SULLIVAN, W. N., M. S. SCHECHTER, R. A. FULTON, J. C. KELLER, and S. R. DUTKY—The Survival of the Madeira Cockroach in Various Atmospheres ..... (Aug.) 661
SULLIVAN, W. N., R. A. FULTON, GARY D. KNIPLING, and JULIAN C. RAINWATER—Effectiveness of Several Insecticidal Aerosols against the Japanese Beetle ..... (Sci. Note, Oct.) 1059
SULLIVAN, W. N., see A. H. YEOMANS ..... (Sci. Note, Feb.) 199
SULLIVAN, W. N., see A. H. YEOMANS ..... (Sci. Note, Apr.) 399
SULLIVAN, W. N., see GARY D. KNIPLING ..... (Sci. Note, Oct.) 1054
SUMMERS, FRANCIS M., see DOUGLAS W. PRICE ..... (Oct.) 933
SUN, YUN-PEI, and JOHN SANJEAN—Specificity of Bioassay of Insecticide Residues, with Special Reference to Phosdrin ..... (Oct.) 841
SWEET, R. C., see D. P. CONNOLA ..... (Apr.) 315
SYLVESTER, EDWARD S., VERNON E. BURTON, and G. V. FERRY—Aphid Control Trials on Sugar Beets and Virus Yellows Disease in Kern County, California ..... (Aug.) 758
SYLVESTER, EDWARD S., and EDWIN L. COX—Sequential Plans for Sampling Aphids on Sugar Beets in Kern County, California ..... (Dec.) 1080
SYLVESTER, EDWARD S., see PAUL P. COOK ..... (Feb.) 101
SYLVESTER, EDWARD S., see TOM E. MITTLER ..... (Aug.) 615

TABER, STEPHEN, 3RD—Forceps Design for Transferring Honey Bee Eggs ..... (Apr.) 247
TAHORI, ALEXANDER S.—A Method for Selecting for DDT-Susceptibility ..... (Sci. Note, June) 611
TANADA, Y., see S. NAKATA ..... (Dec.) 1074
TAYLOR, EDGAR A., see THOMAS J. HENNEBERRY ..... (Feb.) 61, 168
TAYLOR, E. A., see T. J. HENNEBERRY ..... (Sci. Note, Feb.) 197
TAYLOR, E. A., see T. J. HENNEBERRY ..... (Apr.) 233
TAYLOR, E. A., see T. J. HENNEBERRY ..... (June) 420
TAYLOR, E. A., see T. J. HENNEBERRY ..... (Aug.) 659
TAYLOR, E. A., see T. J. HENNEBERRY ..... (Sci. Note, Dec.) 1255
TELFORD, ALLAN D.—Lodgepole Needle Miner Parasites:

Biological Control and Insecticides ..... (Apr.) 347
TELICH, C., J., see R. H. RHODE ..... (Sci. Note, Feb.) 202
TERRIERE, L. C., see E. A. DICKASON ..... (Sci. Note, Oct.) 1058
THOMAS, JOHN G., and J. R. BRAZZEL—A Comparative Study of Certain Biological Phenomena of a Resistant and a Susceptible Strain of the Boll Weevil, *Anthonomus grandis* ..... (June) 417
THOMPSON, C. O. M., see J. WEINTRAUB ..... (Feb.) 79
THOMPSON, L. S., and W. A. RAWLINS—Systemic Insecticides for Six-Spotted Leafhopper Control and Reduction of Incidence of Lettuce Yellows ..... (Dec.) 1173
THURSTON, RICHARD—Resistance in *Nicotiana* to the Green Peach Aphid and Some Other Tobacco Insect Pests ..... (Oct.) 946
TIMMERMAN, J. A., JR., H. W. DOROUGH, J. R. BUTTRAM, and B. W. ARTHUR—*In Vitro* Stability and Recovery of Insecticides from Milk ..... (June) 441
TIMMERMAN, J. A., JR., see H. W. DOROUGH ..... (Feb.) 25, 97
TOMLINSON, W. E., JR.—Control of *Sparganothis sulfurana* on Cranberry ..... (Sci. Note, Aug.) 811
TOUHEY, J. G., and D. F. BRAY—An Evaluation of Certain Compounds as Feeding Deterrents against the Smaller European Elm Bark Beetle, *Scolytus multistriatus* ..... (Apr.) 293
TOWER, B. A., see EDWARD C. BURNS ..... (Oct.) 913
TREECE, ROBERT E.—A Comparison of the Susceptibility of the Face Fly, *Musca autumnalis*, and the House Fly, *M. domestica*, to Insecticides in the Laboratory ..... (Sci. Note, Aug.) 803
TREECE, ROBERT E., see HENRY L. FRANCE ..... (Aug.) 642
TRAUB, R., and M. A. C. DOWLING—The Duration of Efficacy of the Insecticide Dieldrin against the Chigger Vectors of Scrub Typhus in Malaya ..... (Aug.) 654
TRAVIS, R. V., see T. J. HENNEBERRY ..... (June) 420
TSAO, CHING H., and EDGAR W. CLARK—Absorption and Translocation of Di-Syston by Cotton Plants ..... (Dec.) 1228
TSAO, CHING H., see WILLIAM L. LOWRY ..... (Dec.) 1209
TURLEY, DON L., see PAUL D. GERHARDT ..... (Dec.) 1217
TUTTLE, DONALD M., GEORGE P. WENE, and LOUIS W. SHEETS—The Cotton Leaf Perforator and Its Control in Arizona ..... (Feb.) 67
TUTTLE, DONALD M., and GEORGE D. BUTLER, JR.—A New Eriophyid Mite Infesting Bermuda Grass ..... (Oct.) 836

USINGER, R. L.—STANLEY BARRON FREEBORN (1891–1960) ..... (Obituary, Oct.) 1069

VAN DEN BOSCH, R., see T. W. FISHER ..... (Sci. Note, Feb.) 196
VANDERZANT, ERMA S., and T. B. DAVICH—Artificial Diets for the Adult Boll Weevil and Techniques for Obtaining Eggs ..... (Oct.) 923

WADDLE, B. A., see LAMAR C. BROWN ..... (Apr.) 309
WAGNER, ROBERT E.—Control of the Yellowjacket, *Vespula pennsylvanica*, in Public Parks ..... (Aug.) 628
WALKER, J. K., JR., see L. H. WILKES ..... (Sci. Note, June) 601
WALKER, R. L., see R. E. FYE ..... (Aug.) 622
WALLWORK, J. A., and J. G. RODRIGUEZ—Ecological Studies on Oribatid Mites with Particular Reference to Their Role as Intermediate Hosts of Anoplocephalid Cestodes ..... (Aug.) 701
WALTER, E. V., see JOHN W. WILSON ..... (Aug.) 689
WALTER, E. V., see W. D. GUTHRIE ..... (Dec.) 1248
WALTON, R. R., see JAMES R. GIFFORD ..... (Feb.) 16
WALTON, R. R., see RICHARD G. PRICE ..... (Sci. Note, Aug.) 819
WARE, GEORGE W., and EDWARD C. NABER—Lindane in Eggs and Chicken Tissues ..... (Aug.) 675
WARE, GEORGE W.—BHC Contamination of Chicken Eggs From Treated Litter ..... (Sci. Note, Aug.) 802
WARE, GEORGE W., see HENRY L. FRANCE ..... (Aug.) 642
WARNER, R. M., see A. P. YERINGTON ..... (June) 425
WATTERS, F. L.—Effectiveness of Lindane, Malathion, Methoxychlor and Pyrethrins-Piperonyl Butoxide against the Hairy Spider Beetle, *Ptinus villiger* ..... (Sci. Note, Apr.) 397
WEARDEN, STANLEY, see ROBERT L. HARRIS ..... (Feb.) 40
WEBB, JOSEPH E., JR.—Resistance of Some Species of Cockroaches to Organic Insecticides in Germany and France, 1956–59 ..... (Sci. Note, Aug.) 805
WEIDENBACH, CARL P., see R. D. RADELEFF ..... (Sci. Note, Oct.) 1051
WEIDHAAS, DONALD E., MALCOLM C. BOWMAN, and CLAUDE H. SCHMIDT—Loss of Parathion and DDT to Soil from Aqueous Dispersions and Vermiculite Granules ..... (Feb.) 175
WEIDHAAS, DONALD E., see CLAUDE H. SCHMIDT ..... (June) 583
WEINBURGH, H. B., J. W. KILPATRICK, and H. F. SCHOOF—Field Studies on the Control of Resistant House Flies ..... (Feb.) 114
WEINTRAUB, J., and C. O. M. THOMPSON—Comparison of ronnel. DOWCO 109, and DOWCO 105 for Systemic Control of Cattle Grubs in Alberta ..... (Feb.) 79
WEINTRAUB, J., W. S. MCGREGOR, and H. M. BRUNDRETT—Artificial Infestions of the Northern Cattle Grub, *Hypoderma bovis*, in Texas ..... (Feb.) 84
WENE, GEORGE P., L. W. SHEETS, and H. E. WOODRUFF—Emergence of Overwintered Pink Bollworm in Arizona ..... (Sci. Note, Feb.) 192
WENE, GEORGE P., and L. W. SHEETS—Control of the Beet Armyworm on Cotton in Arizona ..... (Sci. Note, Feb.) 192
WENE, GEORGE P., see DONALD M. TUTTLE ..... (Feb.) 67
WEST, A. S.—Chemical Attractants for Adult *Drosophila* Species ..... (Aug.) 677
WEST, A. S., see A. W. A. BROWN ..... (Aug.) 670
WESTIGARD, PETER H., see HAROLD F. MADSEN ..... (Oct.) 892
WHITE, ERNEST B., and PAUL DEBACH—A Simple Anesthetizing Device for Microscopic Observation and Manipulation of Minute Insects ..... (Sci. Note, Aug.) 806
WHITLAW, J. T., JR., see ROGER H. RATCLIFFE ..... (Apr.) 356
WILCOX, J., and A. F. HOWLAND—Control of Aphids and Spider Mites on Strawberries with Dusts and Low- and High-Gallonage Sprays ..... (Apr.) 287
WILCOXSON, ROY D., see H. C. CHIANG ..... (Oct.) 850
WILKES, L. H., and J. K. WALKER, JR.—Modification of a Commercial High-Clearance Sprayer for use in Small Plot Spraying ..... (Sci. Note, June) 601
WILKES, L. H., see H. M. GRAHAM ..... (Sci. Note, Oct.) 1057
WILLETT, DONALD N., see G. R. DEFOLIART ..... (Oct.) 871
WILLIAMS, ROBERT E., and DWIGHT M. DELONG—Increasing the Rate of Egg Productivity in *Aedes aegypti* ..... (Sci. Note, Dec.) 1265
WILLIS, EDWIN R., see FEDERICO MALO ..... (June) 530
WILSON, B. H., see EDWARD C. BURNS ..... (Oct.) 913
WILSON, E. L., see H. A. DEAN ..... (Apr.) 333
WILSON, H. G., see J. B. GAHAN ..... (Feb.) 63
WILSON, H. G., see G. C. LABRECQUE ..... (Sci. Note, Dec.) 1257
WILSON, JOHN W., and E. V. WALTER—The Effect of Plant Type Upon Corn Earworm Control in Sweet Corn ..... (Aug.) 689
WINTON, M. Y., see T. R. FUKUTO ..... (Oct.) 955
WOLFENBARGER, DAN, and J. P. SLEESMAN—Plant Characteristics of *Phaseolus vulgaris* Associated with Potato Leafhopper Nymphal Infestation ..... (Aug.) 705
WOLFENBARGER, DAN, and J. P. SLEESMAN—Resistance in Common Bean Lines to the Potato Leafhopper ..... (Oct.) 846
WOLFENBARGER, DAN, and J. P. SLEESMAN—Resistance to the Mexican Bean Beetle in Several Bean Genera and Species ..... (Oct.) 1018
WOLFENBARGER, DAN, and J. P. SLEESMAN—Resistance to the Potato Leafhopper in Lima Bean Lines, Interspecific *Phaseolus* Crosses, *Phaseolus* spp., the Cowpea, and the Bonavist Bean ..... (Dec.) 1077
WOOD, E. A., JR.—Description and Results of a New Greenhouse Technique for Evaluating Tolerance of Small Grains to the Greenbug ..... (Apr.) 303
WOOD, E. A., JR.—Biological Studies of a New Greenbug Biotype ..... (Dec.) 1171
WOODHAM, D. W., see L. H. DAWSEY ..... (Sci. Note, Dec.) 1264
WOODRUFF, H. E., see GEORGE P. WENE ..... (Sci. Note, Feb.) 192
WRICH, M. J.—A Comparison of Co-Ral, Ronnel, and Ruelene Dusts for Screw-Worm Control ..... (Oct.) 941

WRICH, M. J., W. F. CHAMBERLAIN, and C. L. SMITH—Toxicity of General Chemical Compounds 3582, 3583, and 4072 to Screw-worms in Laboratory and Field Tests .....(Sci. Note, Oct.) 1049
WRICH, M. J., see R. H. ROBERTS.....(Sci. Note, Oct.) 1047

YARUSS, F. R., see H. R. MOFFITT.....(June) 504
YEOMANS, A. H., R. A. FULTON and W. N. SULLIVAN—Aerosol Dispensing System for Aircraft Disinsectization .....(Sci. Note, Feb.) 199
YEOMANS, A. H., R. A. FULTON and W. N. SULLIVAN—An Insecticide Vaporizer for Treating Small Enclosed Areas .....(Sci. Note, Apr.) 399
YERINGTON, A. P., and R. M. WARNER—Flight Distances of Drosophila Determined with Radioactive Phosphorus .....(June) 425
YORK, G. T., see J. L. JARVIS.....(Sci. Note, Feb.) 213

ZAKI, MOHIB, and H. T. REYNOLDS—Effects of Various Soil Types and Methods of Application upon Uptake of Three Systemic Insecticides by Cotton Plants in the Greenhouse.....(June) 568